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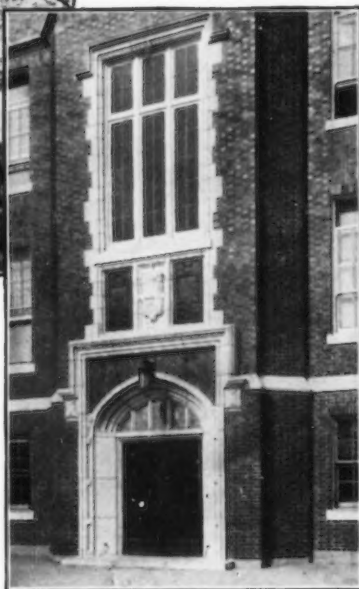
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COVER—Elevation of Garden Temple in the grounds at
Eastbury, England. Designed by Sir John Vanbrugh, Kt.

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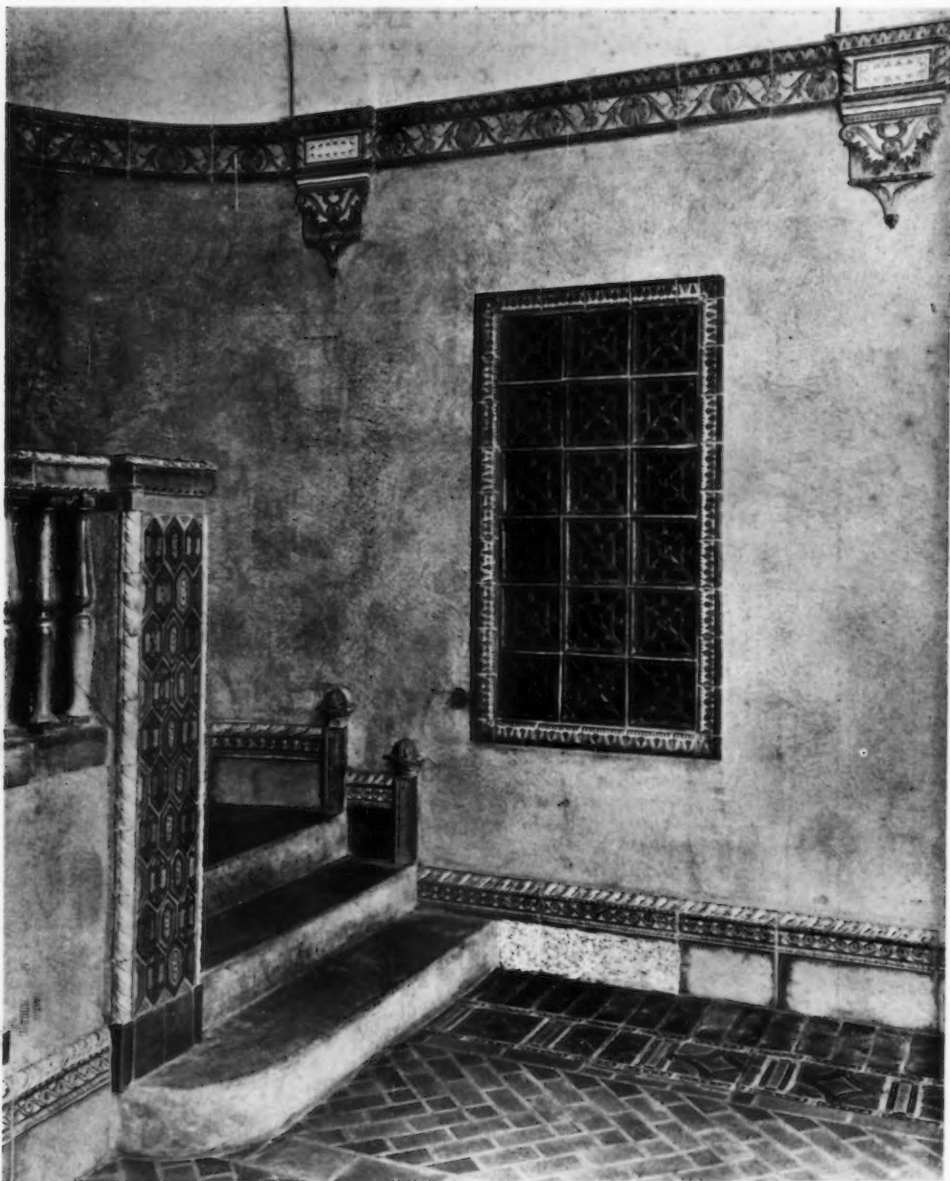
LEON V. SOLON
RUSSELL F. WHITEHEAD

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DETAIL OF STAIRWAY, WITH RADIATOR GRILLES
OF FAÏENCE. AETCO BUILDING—THE NEW YORK
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AN ITALIAN MAJOLICA FOUNTAIN IN THE MAIN DISPLAY ROOM. AETCO BUILDING—THE NEW YORK OFFICES OF THE AMERICAN ENCAUSTIC TILING CO.

The DISPLAY ROOMS of a TILE MANUFACTORY



By Leon V. Solon

ONE of the most intricate problems of modern salesmanship concerns the manner of presentation of decorative products: the complication increases when the product is one that is just emerging from the fulfilment of purely utilitarian needs, to enter the artistic field—and this is the case with tile today. Though the least informed of the public is acquainted in a general way with the brilliant past of the potter in every land throughout the ages, there appears to be little mental connection between the achievement of former days and current possibilities. In the tile industry a very limited few are striving to express the artistic aspirations of America, hoping that in the course of

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time the influence of pure ideals may be as fruitful of result in that industry as they have proved to be in American architecture. In the making of artistic tile, a condition exists which is paralleled in several other decorative art industries; we find that the process of evolution which has prevailed throughout the development of the applied arts in former time is now being reversed. In past ages we find that technical proficiency is in most cases a natural result of accumulated artistic experience; in fact, the necessity for improving the media for artistic expression often compelled the perfecting of technical methods. Today we find great technical achievement awaiting utilization in artistic practice.

The fallacy so loudly proclaimed by William Morris and his proselytes, that primitive methods stimulate artistry in craftsmanship, has died for lack of root and leaf: and though the many masterpieces of the potters' art were in most cases the outcome of rule of thumb methods, or shop tradition in production, there is no more reason that the modern potter should suffer artistic limitation through the scientific control of uncertain factors in material or process, than that the painter today should be considered handicapped because he buys his colors ready-made in tubes, instead of making them himself like Cimabue or Giotto.

The tile industry in this country sold its soul at birth to the devil of commercialism; with adolescence, it begins to show signs of regeneration: in a few instances a healthy desire is noticeable to formulate ideals and standards of craftsmanship on a par with those which actuated the potters of ancient times. Technical achievement is at a higher point of attainment than at any other period in the history of ceramics. In this respect, the greatest contribution to progress of recent years has been made by H. D. Lillibridge, who considers no effort too great if it is productive of some process which serves artistic expression; his technical knowledge and artistic sympathy have successfully revived lost processes and devised new methods of the greatest value to the designer, in such profusion that a generation of artists could hardly exhaust them.

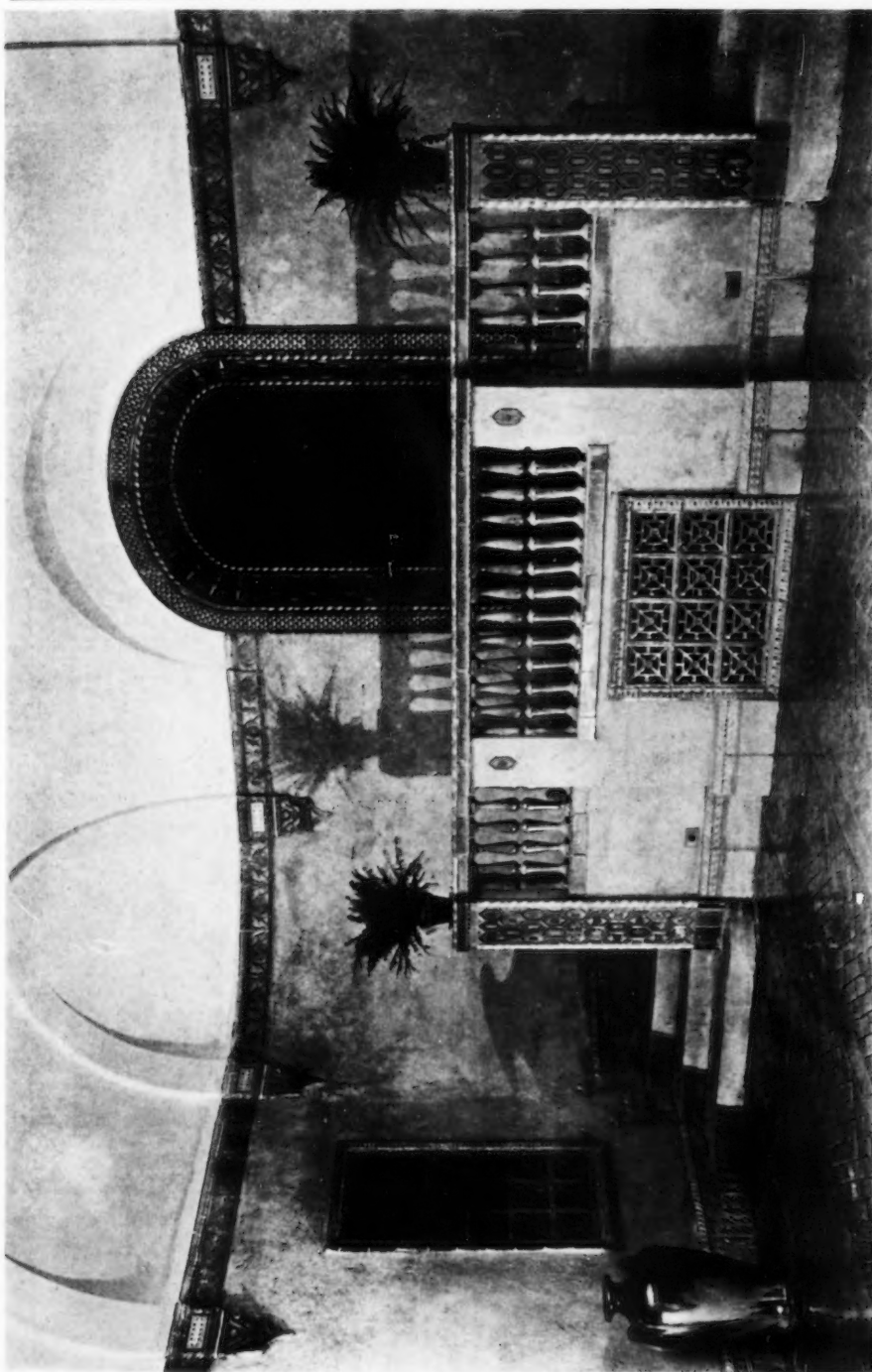
There is an urgent necessity to demonstrate the decorative capacity of tile through the installation of ornamental schemes: the decorative development of tile is in its infancy in this country, and great difficulty is experienced by many architects, and the majority of laymen, in visualizing the ultimate effect from an assortment of samples grouped together; it was with this circumstance in view that the schemes here illustrated were contrived. Comparatively little has been produced to which reference can be made as an aid to gauging indeterminate qualities of effect; the demonstration of certain types of effect through tile installation is, therefore, essential in premises in which

questions of treatment will be discussed.

With the prevalence of commercial standards from the initial stages of industrial development to the present time, a set idea has been impressed upon the public mind as to the most appropriate uses for tile. This is, in a great measure, the aftermath of a manufacturing sales campaign which featured tile solely as a "sanitary" product. It must be conceded that when that propaganda was launched, artistic achievement was a minus quantity. When the interior and exterior treatments of the Aetco Building were being worked out by the company's art department, the necessity was realized for neutralizing certain preconceived ideas which were detrimental to the artistic expansion of the industry: also, that an opportunity presented itself for demonstrating the value of tile or faience as a medium for color effect in architecture and interior decoration. In the façade, an effort was made to show that architectural detail could be given color interest without any of the garishness which the uninitiated imagine is a predominant attribute of glazed clay products. Faience is used which has all the structural advantages of terra-cotta; its restrained harmony of russet, black, Tuscan red, rich low-toned blue, cream and gold, show at a glance that structural clay need not necessarily be crude in color or aggressively commercial in character. The Greek principles for color location governed the general planning of color on the detail; the coloring of the modelling over the door-way presented many debatable points for treatment, all of which were satisfactorily solved by the application of Greek polychrome methods. Particular attention was paid to the modelling, that the plastic quality of clay should reveal itself in treatment. The mellowness of color which characterizes this faience is produced by using the Tuscan glazes created by H. D. Lillibridge, which have an unusual texture, a rich color variation, and the unusual recommendation that they are not injuriously affected by the most rigorous extremes of climate.

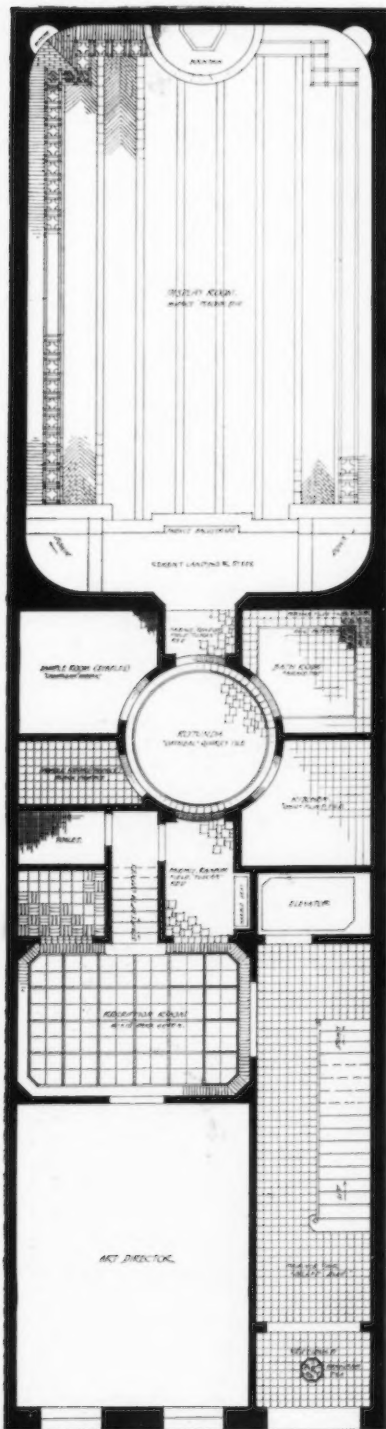
The entrance corridor is treated with studied simplicity; a dark Delft blue

three hundred sixty-four



STAIRWAY TO MAIN DISPLAY ROOM, AETCO BUILDING—THE NEW YORK OFFICES OF THE AMERICAN ENCAUSTIC TILING CO.

The decorative features are treated in polychrome after the manner of the Italian majolica coloring.



DOOR TREATMENT IN ROTUNDA, AETCO BUILDING—THE NEW YORK OFFICES OF THE AMERICAN ENCAUSTIC TILING CO.



BATHROOM. BASE OF PERSIAN TILE, WALLS OF UNGLAZED BISCUIT TILE, AETCO BUILDING—THE NEW YORK OFFICES OF THE AMERICAN ENCAUSTIC TILING CO.

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covers the floor, extending a short distance up the walls as a low wainscot, terminated with a rope molding. Two highly decorative panels by Arthur Crisp are hung on rough stucco walls. The subdued quality of the façade, and the great simplicity of the entrance vestibule, were conceived for the following reason: when an architect or client comes to this building to decide some tile effect, the mental concentration necessary for the undertaking does not usually operate in the street, or in the vestibule; the state of mind is preparatory to the effort, and should be aided by means of treatments that are unobtrusive but helpful towards severing thought from previous and extraneous impressions, and preparatory to those about to be received. As the visitor enters the reception-room the first reaction is stimulated, and a preconceived impression neutralized which exists in

the mind of many, to the effect that tile is a purely commercial product, capable only of cold color effect. The color quality of this little room is one of great sumptuousness; its walls are covered with 3x3 inch tiles embossed with a simple Greek fret, the field and detail being colored alternately with red, black, and gold; this variously colored tile is set at random, producing a rich and interesting color vibration, quite low in tone value. The floor is of large blue-green tiles, panelled with a narrow strip ornamented with a simple repeating detail, with embossed gilt spots at the intersections. One of the Parthenon metopes, reproduced in faïence, is inserted in the wall over the telephone operator's desk; it is treated with a special type of glaze which develops a brownish tint on those projections which cause the glaze to lie thinly on the surface; this produces an effect



RECEPTION ROOM. AETCO BUILDING—THE NEW YORK
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three hundred sixty-seven



STREET ENTRANCE IN POLYCHROME FAÏENCE.
AETCO BUILDING—THE NEW YORK OFFICES
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of ageing, which is singularly appropriate to the fractured condition of the original. The grilles are of faïence treated with a vermillion glaze. The color effect is carried up the stairway leading to the general office, which is visible from the door-way on entering, by using the wall tile as a base to the steps.

The visitor leaves the reception room through a little vaulted corridor, paved with Tuscan red faïence tiles laid at random; a marble seat fits in a recess, which

is decorated with American-Persian tiles arranged partly at random, after the fashion in which they decorate some of the mosque towers in northern Africa. This corridor leads to a small rotunda, on to which open display and sample-rooms. As white wall-tile is a very important feature in the output of this company, it was necessary to originate some form of decoration that would emphasize the technical excellence of the product, and endow it with a measure of attractiveness which it lacks when seen alone. White wall-tile has the unfortunate peculiarity of being the least adaptable of all the clay products to decorative assimilation. The problem of making this important item of manufacture decoratively interesting seemed almost beyond solution, when the idea germinated that the late eighteenth century French faïence might be fruitful in suggestion. After a thorough examination of historic examples, the solution was found in the dinner-plates of that period. The procedure followed was to create the same proportional relation between the ornamental panel border and the field that was established between the plate border and the center of the plate; it was then necessary to translate those ceramic decorations into an architectural scale.

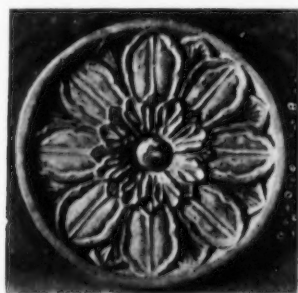
The very general desire for colored bath-rooms had to be provided for, as the white tile treatment is practically obsolete for residences of any pretension to modernity, distinctive color schemes and treatments being the order of the day. Special color effects in variously combined ceramic materials for the kitchen had also to be devised; partly in the hope that the elusive cooks of this age may become attached to their surroundings, and partly with the realization that the mistress of the house may periodically have to spend many hours there herself, when domestics are unprocurable.

Progressing onwards we enter the main display room, in which the appropriateness of faïence is demonstrated for the polychrome treatment of various architectural features. The stylistic treatment is that of the Italian Renaissance; as the decorative color methods of the Della Robbias have usually prevailed in such

three hundred sixty-eight



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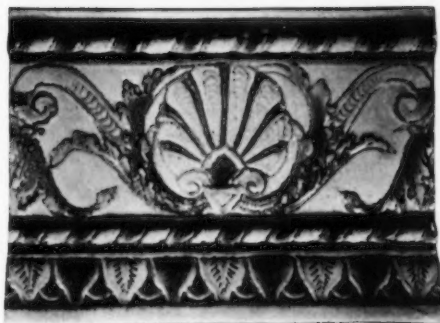
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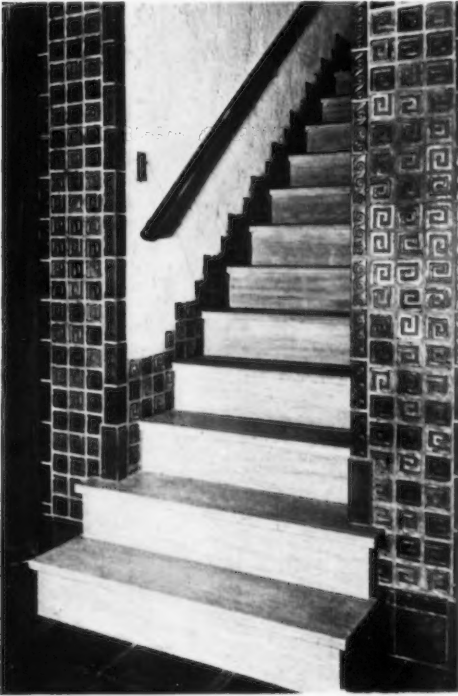
DETAIL, AETCO BUILDING--THE NEW YORK OFFICES OF THE AMERICAN ENCAUSTIC TILING CO.

(1) Polychrome faience details of façade.

(2) Polychrome majolica detail.

(3) Original Greek detail, colored and used as door trim in hallway.

three hundred sixty-nine



DETAIL OF RECEPTION ROOM. AETCO BUILDING—THE NEW YORK OFFICES OF THE AMERICAN ENCAUSTIC TILING CO.

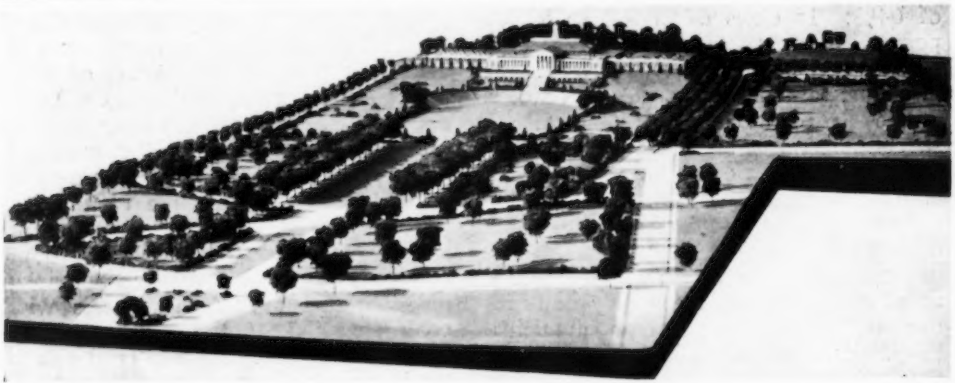
cases, a variation was attempted. As the result of a general investigation into the color methods of the ceramists of the 16th century, it was found that much Italian majolica was decorated with detail essentially architectural in character, treated in a distinctly ceramic fashion. Data were carefully gathered, and a system of treatment developed for the doorway, frieze, fountain, balustrade, etc. It was interesting to find that several of the Greek methods of color arrangement upon detail prevailed at that period. The principle of color and ornamental alternation, which was as much practiced by the Italians as by the Greeks, was featured in the color treatment of the doorway. The general effect of the entrance,

with its deeply splayed jambs, recalls the very early Renaissance buildings of Italy; intensely brilliant blues, vermillion, and gold, illumine the shadows, and suggest the heraldic quality of coloring which characterizes work of that period.

The sales value of this building depended upon the reflection in treatment of the trend of decorative taste; as this could only be gauged through a daily contact with the varying problems, the designing of the exterior and interior faience or tiling was done by the company's art department in New York. The building was an old residence which was made over; the architects for the reconstruction were Messrs. Rich and Mathesius.



NICHE AT ANGLE OF MAIN DISPLAY ROOM. AETCO BUILDING—THE NEW YORK OFFICES OF THE AMERICAN ENCAUSTIC TILING CO.



The grounds of the Handley Consolidated Public School under construction at Winchester, Virginia, comprise seventy acres and include an athletic field and stadium, tennis courts, a golf course, a playground with wading pool for children and a public park. It is aimed in this single school unit to meet the recreational needs of all the people of the entire community; the light of city planning experience, however, will show that for geographical reasons a single recreational unit cannot supplant neighborhood parks and playgrounds.

Walter McCornack—Architect.

Leroy Grumbine—Modeler.

SCHOOL DISTRIBUTION AND AREAS IN THE CITY PLAN



By George Burnap

(Elsie Miriam Parrett collaborating)

THE allocation of public schools has received less attention from city planners than the significance of school areas in the city plan warrants. City planning has been largely confined to the obvious physical make-up of a city—to the *prima facie* features of streets, transportation facilities, monumental buildings, parks and playgrounds. The school plan has not been considered an integral part of the city plan because its properties have not been regarded as permanent in character, nor its activities of a kind to affect the generally recognized phases of city planning. School houses are held to be proprietary property, which may be sold, moved, or transferred to other uses. Their relation to streets, transportation, waterways, civic centers and parks is obscure. Furthermore, school funds are usually raised by separate levies and handled through agencies other than the general municipal

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organization, and the whole educational system is generally found in the hands of a distinct professional body which is supposed to supply and foresee not only all academic and administrative needs but those of school housing as well. This is doubtless the very practical reason why schools have not held equal place with other municipal buildings and public areas in the city planner's program.

SCHOOL BUILDINGS AFFECT THE PHYSICAL ASPECT OF A CITY.

Schools warrant the attention of the city planner because they constitute a comparatively permanent physical feature of the city, contributing largely to its architectural character and to emphasis of the city plan. Schools represent the greatest single expenditure of a city. The proportion of municipal funds spent for schools reaches in one city (Bellingham, Washington) the astonishing figure

of 64%. In cities of 30,000 to 50,000 population, an average of 40%, and in cities over 50,000 an average of 28% of all municipal moneys is spent for schools. These figures hold relatively true for school investment exclusive of operation, the average value of school properties in cities of 30,000 to 50,000 population being approximately 36% of all municipally owned property. In reality the ratio is greater than these figures would indicate, as school plants are financially non-productive, while many other municipal properties, such as public service utilities, are productive or self-supporting. Programs for school buildings are today perhaps more ambitious than for any other municipal development; in almost all large cities the rapid growth of population has made necessary enormous expenditures for school housing without delay. The report of building operations in Omaha, Nebraska, for the years 1919-1920-1921 show permits for school buildings to cost \$3,124,000; Washington, D. C., has expended \$2,200,000 in school building construction during the past fiscal year; Buffalo, New York, has an \$8,000,000 school building program; Niagara Falls a \$3,500,000 program.

Since schools consume so large a proportion of municipal building funds, it logically follows that school buildings must contribute largely to the characteristic aspect of a city; therefore, school buildings are a concern of the city planner in their individual aspect, in their group relations and in their architectural coordination with the city plan.

SCHOOL AREAS ARE RECREATIONAL UNITS IN THE CITY PLAN.

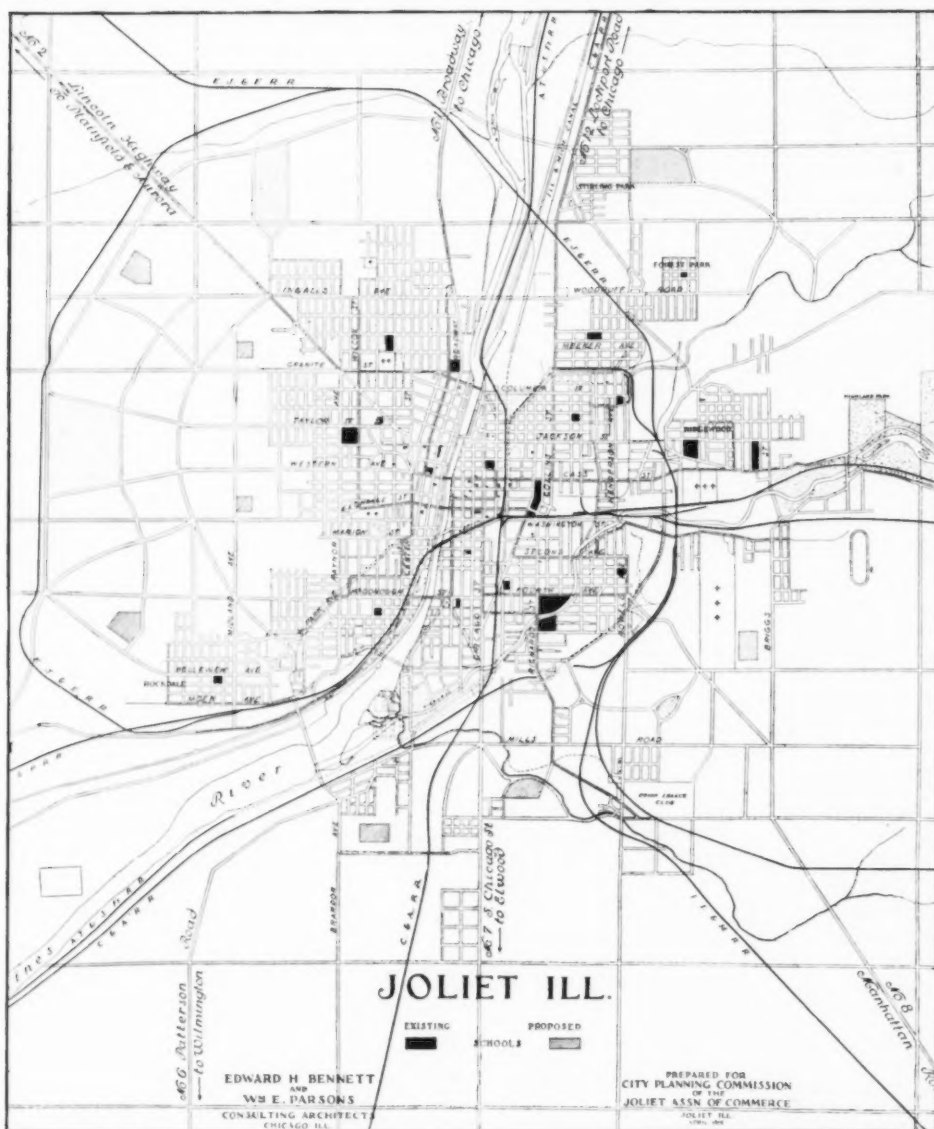
School areas need to be predetermined by the general city plan from another standpoint. Educators now regard play as an important phase of education, and consider large open spaces no less essential than classrooms. The wider use of the school plant—"fourteen hours a day, seven days a week, and fifty-two weeks a year" by adults as well as children, links community recreation with the school. The city planner has made parks and playgrounds one of his primary considerations in the arrangement of city

spaces. The community playground originated because home grounds were inadequate; the limited area of playgrounds in turn required organized play; and now it is proposed to unite the community playground with the school, as a measure of economy in obtaining playground supervision by the regular educational staff. School grounds may thereby supersede separate playgrounds and to some extent, perhaps, supplant neighborhood parks. With this wider comprehension of the function of the school and its inclusion of and relation to recreational spaces, the city planner quickly may realize that the determination of school areas is a problem for his particular attention. It is but a step from recognition of school buildings as permanent civic features and of school grounds as civic recreational spaces, to realization that school areas are public reservations which will be found to relate to almost every phase of city planning. Appreciation of this latter fact will insure the active interest of city planners in the location and size of present and future school areas from the standpoint of city-plan efficiency.

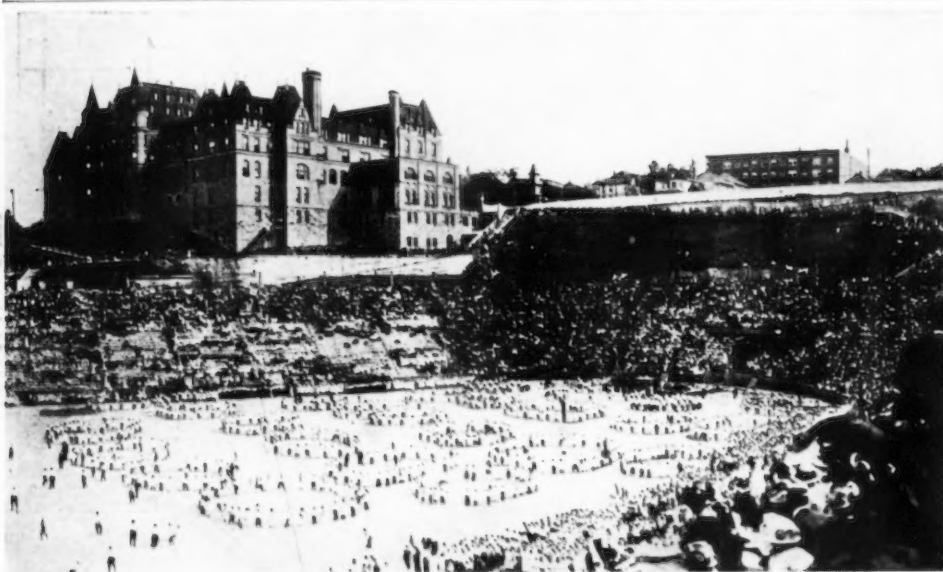
INITIAL AIDS TO THE CITY PLANNER IN DETERMINING SCHOOL LOCATION AND AREA.

To what degree the city planner will need to study school housing, as a preliminary to coordinating school areas with the city plan, depends upon the steps already taken by school authorities. In many cities, scientific school surveys have been made by school officials or special committees. The United States Bureau of Education sends out experts to survey such cities as call for this service and fulfill certain requirements. These surveys differ in extent and thoroughness, some concerned very largely with strictly academic and administrative problems; all dealing to some extent with school building, since it is rare indeed to find a city whose school housing facilities are adequate. The general and exact locations of such additional plants as are deemed necessary are rarely worked out in a thorough or scientific manner. In the Bloomington, Indiana, report, a most

three hundred seventy-two



Allocation of schools in a city plan depends upon the geographical distribution of school population; exact location of school sites depends largely upon the major street system; the acreage depends upon the future school attendance, which may be forecast by past ratios and predetermined or stabilized by zoning. The City Plan for Joliet, Illinois, prepared by Messrs. Bennett and Parsons, shows generous allotments for future school grounds in outlying districts and spacious grounds to existing schools in the built-up districts.



Irregular topography does not necessarily depreciate a school site which rates high in other respects. A gulch between the Tacoma High School Building and Puget Sound provided the opportunity for a stadium with a seating capacity of thirty-two thousand and a field of three and six-tenths acres.

painstaking survey in some respects, the only recommendation as to future buildings is "conditions indicate that the buildings next constructed should be in the southeast and southwest portions of the city. Available lots in those sections of the city should be obtained as soon as finances will permit in order to insure possibility of a site that will accommodate the largest number of children with minimum requirements of walking." Such a recommendation is too general to be of value in formulating a definite building program. Local school administrators are usually painfully aware of immediate needs, and often have worked out the problem on a more accurate basis.

SCHOOL POPULATION MAY BE APPROXIMATED FROM A SURVEY OF THE TOTAL POPULATION

If no survey has been made and no building program formulated, the usual population survey of the city as a whole will serve as a basis for approximation of school population, its present requirements and estimated growth. The trend of total population will give a fair indication of school population increase or

decrease. Dr. N. R. Englehart of Columbia University, in his comprehensive studies of population in "A School Building Program for Cities," shows that the ratio between school population and total population is apt to be fairly constant. In 103 cities the medium percentage of school population, six to twenty years, is 25.9 of total population. The percentage will vary, of course, in different cities and must be ascertained in dealing with each individual case.

RATIO OF SCHOOL ATTENDANCE TO TOTAL SCHOOL POPULATION VARIES.

The official school census of a city, while supposed to show the number of pupils of legal school age—which differs in the various states, ranging from 7-14 to 5-21—is often faulty, and a reliable school census is the first requisite of an accurate planning program. It should show by age and residence all children of legal school age. Theoretically, school provision should be made for the total school population, but actually the total school population is never in attendance. The compulsory attendance ages are considerably lower than

three hundred seventy-four

legal school age, ranging from 8-12 to 7-16. On a five-year record of the Rockford, Illinois, school, 68 to 71% of the school population were in actual attendance. In Bloomington, Indiana, during the year 1914, 83% of the school population was in attendance. Above the compulsory school age the proportion attending school varies greatly, depending on the character of the community and the traditional attitude toward secondary education in public schools. In some communities a large number of pupils attend private schools. An examination extending over the records of several years will show the average ratio of attendance to total school population, and of school population to total population, and the tendency toward decrease or increase of this ratio. This will give a basis for estimate of future needs.

FACTORS INVOLVED IN GEOGRAPHICAL DISTRIBUTION AND DENSITY OF SCHOOL POPULATION.

The school problem is still further complicated because it involves the factor of geographical areas. The Bureau of Education estimates the density of existing school attendance by block maps. These show at a glance whether schools are properly distributed, whether additional capacity is needed in certain districts, and general locations according to distances to be traveled. It is difficult, however, to forecast future school distribution. The city planner usually makes estimates of growth of total population and population densities of various sections. But school population densities often vary from total population densities, and school population forecasts involve several factors in addition to those upon which total population forecasts are based. The age of families in the neighborhood affects the problem: if the families are young as a rule, as is often the case in a new residential addition or town, it is probable that the maximum school attendance per home has not been reached. Foreign born population has a large percentage of school children. Religious affiliations affect public school attendance in that some sects make very large use of parochial schools. Develop-

ment of industries usually means rapid influx of large families. Encroachment of business sections upon residential areas means light school population density. Apartment house sections have a heavy density of total population and light density of school population.

ALLOCATION OF GRADE SCHOOLS DEPENDS UPON GEOGRAPHICAL AREAS AND SIZE OF BUILDINGS.

The area of each school district, or section, is regulated by the maximum distance a child can walk without difficulty. The Minneapolis report estimates, for example, that maximum distance should not be more than one mile for the first six grades, which, as routes usually follow rectangular blocks, would mean that the radius of the area should not be more than one half mile.

The question then arises whether one building should take care of this maximum area even though so densely populated as to require a very large plant, or whether to further divide the area and cut the distance by erecting two or more small plants. Educators are practically unanimous that one large building is more economical and richer in facilities for the pupil than a number of small schools in the same area. Duplication of facilities is the first point of attack for the efficiency expert in any line. In the study made by the Bureau of Education for Wheeling, West Virginia, the comparative cost of a large and a small school demonstrates that "the larger the building within limits, the richer the facilities that can be given to children; the older and smaller the building, the more expensive it becomes. For example, the per capita cost of the Ritchie School, with an enrollment of 510 pupils, is \$59.10; whereas the per capita cost of the Madison School, with 906 pupils, is \$45.25."

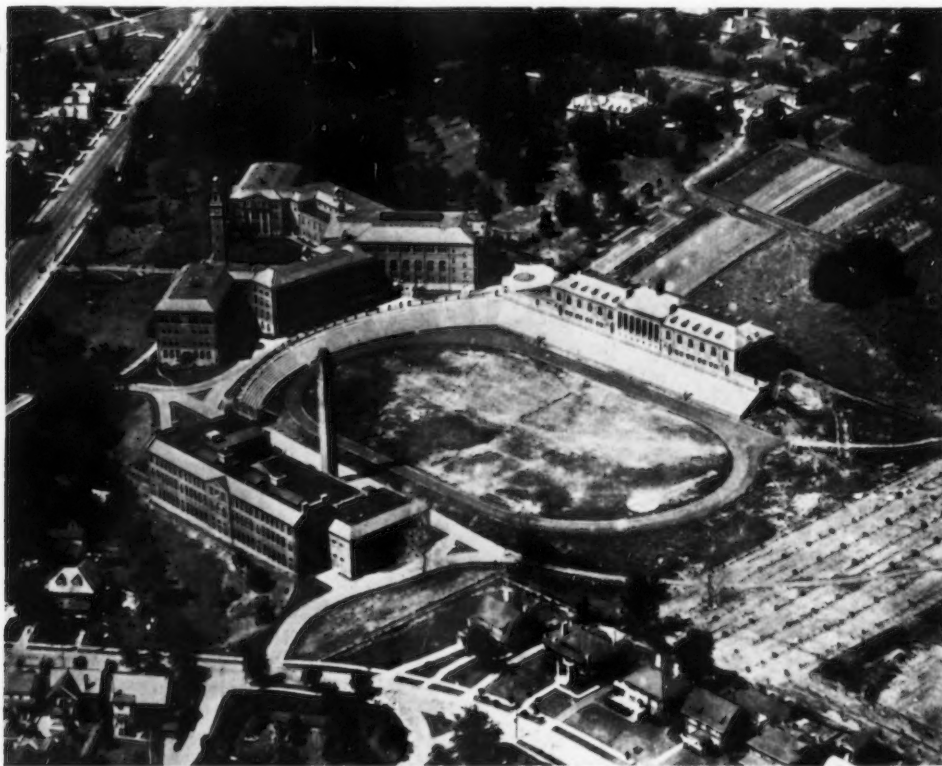
The question occurs whether in a very densely populated area, the plant will be so large that its efficiency will be impaired. This problem has demanded consideration by educators. In the school survey for Wilmington, Delaware, new buildings were recommended to take care of 2,000 pupils each, abandoning old plants; in this city the density of the

various districts appears remarkably uniform and unusually high. In the majority of cities, the districts served by existing schools are found to vary greatly in size; better districting of such cities will indicate where one school may well be enlarged, two schools perhaps be consolidated, and new schools erected, each case with reference to maximum areas which may be served in districts of low school population density, and maximum size of practicable school plants in districts of high density.

SIZE OF GRADE SCHOOL BUILDINGS AFFECTED BY EDUCATIONAL SYSTEM

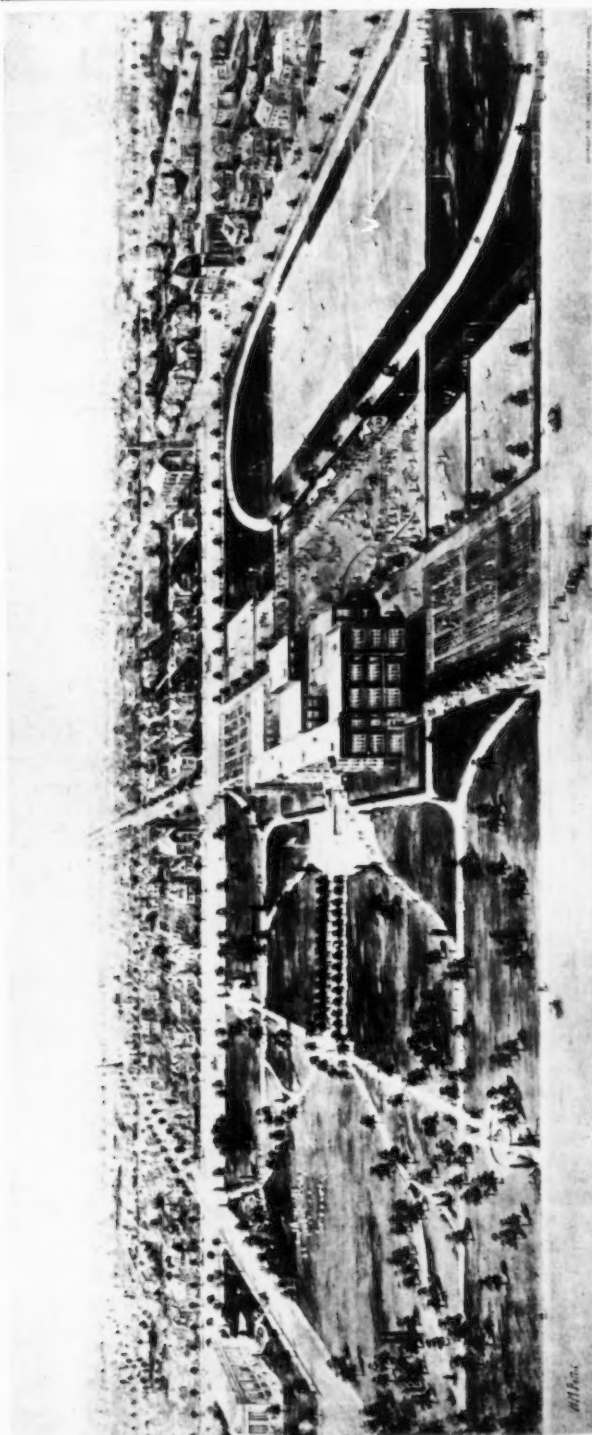
Not only school population but also the educational program has a decided influence on school plants. The size of the building depends upon the day school program, taking it for granted that each school is to have a playground attached.

Under the traditional system all pupils were in classrooms at the same time and all on the playground at the same time,—theoretically at least. The platoon, or work-study-play system, made famous by the Gary schools and being rapidly adopted in whole or in part by practically all progressive systems, makes play and work an important and regular part of the school curriculum. The school day is extended; half the pupils are on the playground and in special activities in shop, auditorium or gymnasium, while the remainder are using the classrooms. Hence a school building can accommodate twice the number of pupils under the platoon system as under the traditional system. Mrs. Fernandez, of the Bureau of Education, in her report on the "School Building Program for Athens, Georgia," remarks: "The public school system up to the present time has been



The site of the East Side High School, Cincinnati, Ohio, has sufficient acreage not only for a commodious stadium and athletic field but for a school farm for agricultural instruction.

three hundred seventy-six



three hundred seventy-seven

The Froebel School at Gary, Indiana, (Wm. B. Ittner, Architect), which houses the twelve grades, employs the platoon system of education with consequent equipment of indoor and outdoor gymnasiums, athletic fields, game courts, playgrounds and gardens. The building and ground facilities, therefore, especially fit the plant for its additional use as a community center. The city plan is relieved of providing other open-air recreational areas in this vicinity. From the standpoint of surrounding properties, a better layout of the site would have disposed the park portion of the grounds in an enclosing belt to separate all play areas from the street, thus converting the streets into quasi-parkways and minimizing the objectionable feature of noise.

run on the principle of reserving a school seat for the exclusive use of one child during the entire year. All children have to be in school seats from 9 A. M. to 12 and from 1 to 3, and at 3 all of them are dismissed and turned out to play. The result is that there are never enough seats for all the children to study in nor enough playgrounds for them to play in; and yet large sums of money are invested in these facilities, which the children can have the use of for only a fraction of the day. Thousands of dollars are invested in playgrounds and yet these playgrounds are empty of children all day until 3 o'clock in the afternoon. In fact, if a child is found on the playground before 3 o'clock, he is driven off because he is playing truant. Obviously the playgrounds exist for the use of the children and yet children have the opportunity to use them only a few hours a day because they must be in school seats from 9 to 12 and from 1 to 3 o'clock."

The platoon system originated not with the idea of saving room or money, but of enriching facilities; not of reducing classrooms, but of augmenting special activities. It was a departure in educational methods rather than a device to save space. But shops, gymnasiums and other special rooms are now included in all progressive schools, and it is a question of whether they shall be in use all the time or only part of the time. The traditional system has come to seem wasteful, for the platoon system serves the twofold purpose of enrichment in educational facilities and economy of space in school housing. As a matter of practice, the new system is perhaps more often adopted as an expedient to postpone building, by increasing the capacity of the old plant, than as educational advancement.

If school authorities are contemplating organizing junior high schools, it is possible to relieve overcrowded grade schools and senior high schools, without addition to such plants, by erecting a new building to accommodate the grades that will be transferred to such school. The junior high school, which is being very generally introduced in the city school system, changes the traditional eight-year elementary and four-year high school or-

ganization (the 8-4 plan) to a six-year elementary, three-year junior high and three-year senior high school organization (the 6-3-3 plan). The contributing geographical district of a junior high school may be greater than that of a primary school, since the pupils are older and able to walk farther, and relieves congestion in the elementary school which serves an immediate neighborhood. The innovation of both the 6-3-3 plan and the platoon system materially affects the size of all grade school buildings and thus enters largely into the calculations of the city planner respecting their allocation.

SIZE OF GRADE SCHOOL GROUNDS.

The proper size of the school ground depends upon the size of the building. It is pretty unanimously agreed that the 100 square feet of land per child is the minimum playground space desirable, and these computations should always consider estimates of future as well as present attendance. It is much easier when necessary, to build additional rooms than to acquire additional playground space. The State Board of Education of Minnesota rules that "no elementary school shall be built upon a plot of ground which affords less than 50 square feet of playground per pupil. One hundred square feet per pupil will be required when conditions make it possible to secure this amount of land." If the platoon system is used, and only a part of the children are on the playground at one time, the minimum per enrolled child can be reduced. Many progressive cities have adopted the policy of placing new buildings on areas not less than one city block in size. In the school building program for Minneapolis (1916) "A Million a Year," it is recommended that "in purchasing new sites the policy of obtaining at least a full block and, whenever feasible, a full double block, should be firmly established and pursued." The rapid development of the playground idea and the importance now attached to it is shown by the further recommendation in this report that sites already purchased, but upon which buildings have not yet been erected, shall be enlarged at once before surrounding land becomes

three hundred seventy-eight



Schools best affiliate with social service buildings, libraries and museums to form community or educational centers; they are functionally foreign to a civic center group. In the government plan for Colonial Light Gardens, a new suburb of Adelaide, Australia, the high school and elementary school are made the nucleus of a playground and athletic field, a public bath, neighborhood park and Old Peoples' Home.

more expensive. When additions are made to buildings, the corresponding enlargement of the grounds is considered so essential that "it would be well to establish the rule not to enlarge a building the grounds of which now afford less than 100 square feet per pupil, until additional grounds are acquired." School authorities who have not shown such foresight are now adding to old plants at tremendous cost. Houston, Texas, spent \$50,000 recently to increase school playground areas. Salt Lake City has cut off land from the backs of city lots adjoining school buildings to increase playgrounds.

NUMBER OF JUNIOR AND SENIOR HIGH SCHOOLS DEPENDENT UPON SPECIAL COMPUTATION.

The factors governing the allocation of grade schools, the size of buildings and the area of accompanying grounds do not apply in respect to junior and
three hundred seventy-nine

senior high schools. A different computation is necessary in determining upper school attendance, for compulsory school laws do not apply here. The attendance records of a city compared with the total school population of high school age over a term of years, will show the average per cent. which have attended high school and increase or decrease of this percentage. This study may be extended to comparisons with other cities, but care should be taken to select cities of similar size and conditions, and there is great variation in communities. An industrial town will need far less accommodation according to total school population than will a high class residential suburb. The Bloomington, Indiana, survey indicates that there is a direct relation between occupation and education of parents and the age at which pupils leave school. Economic periods of depression or prosperity have an influence. Residential

communities differ according to tradition and custom. Southern communities tend to send children of high school age to private schools, while in the West the private school is a negligible consideration.

LOCATION OF JUNIOR AND SENIOR HIGH SCHOOLS NOT FIXED BY GEOGRAPHICAL CENTERS.

The locating of the high school and junior high school is simplified perhaps in that the question of distance to be travelled need not be one of the principal factors. The old objection to inequality of distance was often based on sectional jealousy or, at best, on erroneous reasoning. In the plan for Athens, Georgia, the U. S. expert in answering the objection to a consolidated high school plant brings out the fact that "no pupil under such a consolidation would have a further distance to walk than many pupils have to walk now." Up to very recent years a central location for the high school was considered of paramount importance,—meaning by central location the general geographical center of the city, if small, or the general geographical center of the district, if in a large city. The object, of course was to equalize as far as possible the distance of travel for pupils. Of late years, the conviction has been growing that other and more important factors should receive first consideration, and that there are actual disadvantages in a central location for the high school if this means proximity to the business center of the city. Such environment for pupils during intermissions is undesirable; noise of traffic and general atmospheric conditions lower school efficiency. Pupils using street cars increase the already heavy morning traffic toward the business section. Dr. Englehart has voiced the general trend of opinion in saying "it is obvious that such elements as environment, adequacy of site, opportunity for proper architectural setting and proximity to street car lines are far more important than centrality."

We find, in certain cases, a central location favored or an outlying location objected to on what at first seems good reasoning. In Minneapolis, a recom-

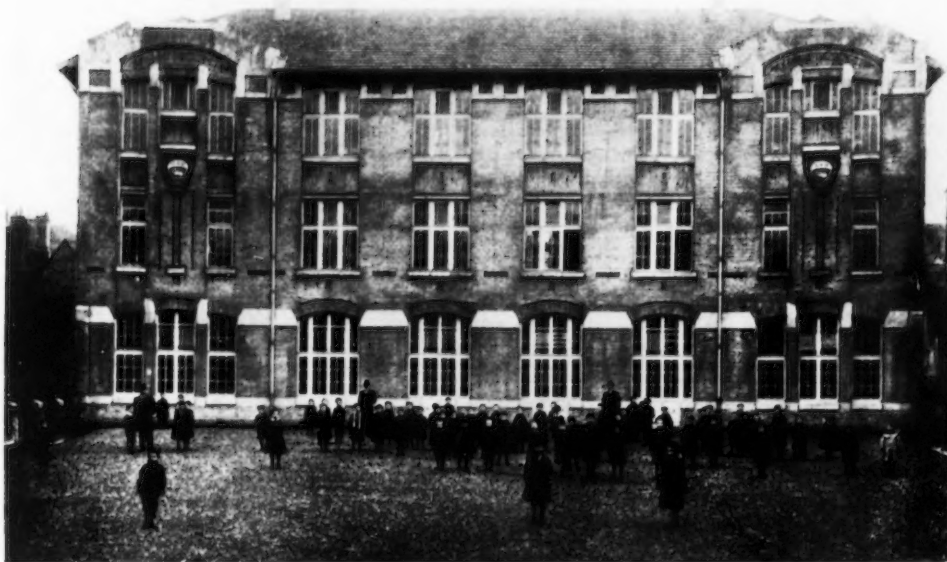
mendation is made to relieve congestion in other high schools by erecting a high school on land already owned in the business district, with the idea that "this central location near the business district would be found especially advantageous for a high school specializing somewhat in practical courses, particularly commercial courses." One of the United States reports brings up the point that a high school, located in a district difficult or requiring carfare to reach, may result in pupils of high school age leaving school. These arguments cannot be very satisfactorily sustained, the problematical advantage of a business location for a business high school would be outweighed, as in the cases of other high schools, by the disadvantages enumerated; and when distance is a serious consideration, the school can better afford, financially and otherwise, to transport pupils than to house them on unfit and usually more expensive sites.

COMMODIOUS AREAS FOR JUNIOR AND SENIOR HIGH SCHOOL GROUNDS.

Adequacy of site is the great consideration in favor of an outlying location. The estimate of minimum size necessary for the high school site varies from five to twenty acres. The Eastern High School under construction in Washington, D. C., has a site of fifteen acres. The High School at Durham, N. C., just being completed, has seventeen and one-half acres. The cost of securing an area of this size in a central location, even in a residential section, is often prohibitive. Some cities with buildings already built in central locations are acquiring separate game and athletic fields. Others are abandoning old buildings, at a financial advantage, and acquiring new outlying sites of ample size. Flint, Michigan, has acquired a beautiful park area of 57 acres upon which to build a new high school. Santa Rosa, California, will care for city high school pupils and those of adjacent school districts in a new half million dollar plant on a site 65 acres in extent.

In the selection of sites, the same principles apply to both grade and high schools, except as to geographical location and size of grounds. Hygienic con-

three hundred eighty



In l'École Communale des Garçons, rue Jean Macé, Le Havre, the open space consists of little more than a walled-in courtyard between the class-room and administration buildings—which is intensively used, however, as an out-of-door class-room and for the gymnastic exercises that are part of the school curriculum. Recreation is a once-a-week affair in the municipal forest on the far outskirts of the city.

siderations are especially important in selecting a site which serves so large a number of children. The city planner will, as a matter of course, select ground which can be properly drained, not located as to receive surface drainage of contiguous lots. One school report recommends that soil should slope away from building at least one inch in three feet, and that there should be drainage from four to six feet under the building as well as on the grounds. Mr. F. B. Dresslar, of the Peabody Teachers' Institute, has made intensive studies of certain housing conditions on the health of pupils, and in U. S. Bulletin No. 5, 1910, shows how poisonous gases and exhalations from poorly drained or "made" soil full of impurities are not only detrimental to buildings but to health of pupils. He shows also that correct orientation of the building is very important, so that each classroom shall receive east or west light, as it is impossible to regulate strong south light so as to secure a proper lighting at all hours of the day for all pupils in the room. This is a matter of direct concern

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to the architect of the school building.

It is obvious that a school site should not adjoin a factory or garage, railroad or street railway, on account of noise, dirt and smoke. It has been argued that from the standpoint of accidents, a street car line running past the school house is preferable to one a block away which little children will have to cross, as it is easier to provide police protection in the former than in the latter case. The crossing of street car lines in the case of elementary school pupils, and the provision of convenient but not contiguous transportation in the case of high school pupils, are important factors in choice of school sites.

Ordinarily speaking, a fairly level piece of ground will permit most economical layout of playground areas, although designers often see opportunities in irregular sites. The grounds of the Eastern High School of Cincinnati, one of the finest in this country, covering an area of 28 acres, have variations in contour of 65 feet; as discussed and illustrated in the ARCHITECTURAL RECORD, April, 1922, a deep and wide ravine of great natural

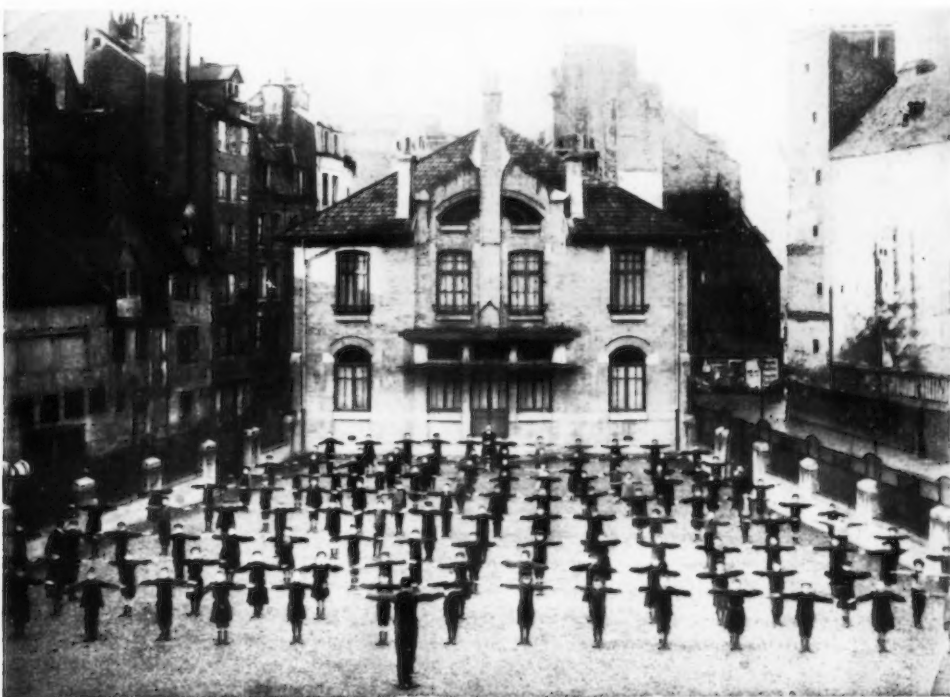
beauty has been preserved and developed by planting, crossed by a foot bridge permitting pedestrians only to enter the main court of the school building. The architect has skilfully utilized the uneven contour in planning the gymnasium, stadium and athletic field on different levels in a way to be both picturesque and convenient. The Washington, D. C., Central High School, while deficient in general recreational space, and Tacoma, Washington, have adjoining stadia made possible by the natural contours. A Greek theatre at Santa Monica, California, one of the features of the high school grounds, takes advantage of the natural topography of the site.

WIDER USE OF SCHOOL PLANTS.

The principle that large school plants are more efficient than a number of small ones is accepted in some localities to the point that there is no division of grades and high school as far as housing is con-

cerned. In Gary, each building carries through the twelve grades. In the unique school planned for Winchester, Virginia, upon which construction is in progress, one great plant on a tract of 70 acres will take care of the entire white school population to an enrolment 50 per cent. in excess of present attendance. It provides for the recreational, social and cultural needs of the city, including an auditorium, stadium and public park. This project although a public school under the administration of the city, is made possible by a private endowment, the Handley Trust Fund, of more than two million dollars. In the words of the Handley Board of Trustees, "this building and these grounds will be the intellectual and civic centre as well as the outdoor playground of the town and region."

The trend of city plan development seems to be the combination of such civic activities as logically belong together, which has resulted in the civic centre, the



Public schools in France, while usually of restricted area, introduce the novel feature of a separate administration building, with director's home attached, as shown in the above illustration of l'École Communale des Garçons, rue Jean Macé, Le Havre. (See also illustration on preceding page.)

community centre, the educational and occasionally the religious centre. Schools best affiliate with social service buildings, libraries and museums. A grade school building seems suitable by location and equipment to become a community centre; the high school perhaps more logically an educational centre. In the Detroit Plan, the Northwestern Playfield provides for a high school building, field house, swimming pool, indoor gymnasiums, men's open air gymnasium, women's open air gymnasium, ball fields and game courts, thus making the high school a component part of an athletic centre. The United States Bulletin, "School Grounds and Play," by Henry S. Curtis, recommends that the school system include a health centre, with dispensary, community house and day nursery. This latter, as found to be the case in Los Angeles, serves the double purpose of caring for children of working women and providing training in child care for high school girls, a phase of domestic art usually neglected in high school home economic course.

SCHOOLS OFTEN JEOPARDIZED BY FORCED ARCHITECTURAL GROUPING.

Some city planners have linked the school plant with the civic centre group. There is no logical connection, however, between the school and the administrative buildings of a civic centre; the location of the civic centre, as implied in its name, makes it undesirable for school purposes; on the other hand, it is not economical to use space in the business district for school sites. Such planning is perhaps the result of conditions already existing and sometimes the desire to make a balanced architectural group. In the recent report issued by the East Orange City Plan Commission the old high school is adjacent to the projected civic centre and a new junior high school is proposed as a part of the new building group. When school buildings are seen merely as architectural units, their real function is in jeopardy. A more legitimate combination occurs in the Colonial Light Gardens, a new suburb of Adelaide, Australia, planned by the Government, where the high school and elemen-

three hundred eighty-three

tary school are grouped with an Old People's Home, the layout comprising a children's playground, oval, and neighborhood park; truly, here is found provision for the entire "seven ages" in an unusual and harmonious grouping. As a general rule, the desire for focal centres in a radial city plan endangers the objective of schools; if schools are to be a part of civic building groups, it is essential that the school itself be the nucleus or congregating point and never be made subject to the purposes of academic design in the city plan mosaic.

LAYOUT OF INDIVIDUAL GROUNDS NOT IN PROVINCE OF CITY PLANNER.

The layout of individual grounds is primarily a problem for the recreational experts, now on the staff of most educational organizations to work out with landscape architects and architects. It interests the city planner only as it obviates the necessity of planning for recreational spaces and special activities elsewhere. School grounds laid out in part as neighborhood parks make other park space in the vicinity unnecessary. The relation of parks and playgrounds with schools is becoming more and more recognized; in the Decatur City Plan Report, twenty-seven "school parks" have been designated on the plan, averaging approximately four acres in extent. In the report for Springfield, Mass., "Parks, Playgrounds and Schools" are grouped for discussion. In the Joliet, Illinois, Plan Report, one section covers "Parks, School Grounds and Recreation."

SCHOOLS CORRELATE WITH MANY PHASES OF CITY PLANNING.

There is indubitable relationship between schools and the city plan in other than recreational aspect. Schools affect land value, increasing those in the general neighborhood, decreasing those in the immediate vicinity. Close proximity to a school is not considered desirable for residences. But if the city planner sets apart sufficiently large areas so that the school building will be placed well in the centre of the area with the playgrounds and courts distributed on all sides, perhaps with a parklike belt between the play areas and the street, the objectionable

feature of noise is largely eliminated and the parking increases the desirability of adjacent building lots by converting the street into a quasi-parkway. There is a direct relation between schools and transportation. Primary schools serve definitely defined geographical districts; but a transportation line to be deflected or newly constructed may materially affect the general population and school population density and thus the size of such school district. A high school plant may serve an unrestricted district but is dependent upon direct lines of communication. A projected bridge may make available a site not otherwise considered.

A GROWING LIAISON BETWEEN SCHOOL AND CITY PLANNERS.

The Muscatine School Survey recommends in regard to future planning that the direction of probable future growth be ascertained as accurately as possible on the basis of available residential and industrial districts. This necessarily coordinates with whatever plans the city may have for industrial development and city planning. We quote at length from the recent report of Springfield, Mass., which shows that school authorities are turning to the city planner for aid and that the city planner recognizes the many factors involved in the problem; although the report does not show a comprehensive survey of the entire school properties has yet been made:

"In November, 1921, the Planning Board was asked to give its opinion on the location of the proposed primary school and playground on the triangular tract of land bounded by Allen Street and Sumner and Wheeler Avenues. It is a rapidly growing residential district. The site is bounded on two sides by well traveled thoroughfares which are destined to become much busier in the near future. Most of the children going to and from a school or playground on this site would have to cross high speed automobile thoroughfares. This would be especially dangerous in the case of primary school scholars. There will probably be trolley lines on one or both of these streets in the future. The site is within 1,500 feet of the Diamond Match

plant with its explosion and conflagration hazard. The site is often under water and swampy; at best the cost of draining it would be high. Despite the fact that the assessed valuation of the several plots included are not immoderately high at the present time, in zoning it would undoubtedly have to be made a local business centre as it is at the junction of two or three principal thoroughfares. It would obviously be wasteful to locate a school in what should be a business centre. A study of the trend and distribution of population in this part of the town would show that the centre of the district would probably be further to the north than the proposed site. Such a location would also probably be advantageous from the standpoint of property values, and the obviating of the necessity of the crossing of main thoroughfares."

SCHOOL AND CITY PLANNING RECIPROCITY.

Zoning laws which tend to regulate shifting of population will make school housing needs more stable and calculable. It is possible in the future that city planners will recognize the relationship still further, and that existing schools and proposed locations in turn may influence other phases of the city plans. Zoning regulations may well be passed to protect school property, for the efficiency of a school should not be vitiated by the building of a nearby garage or noisy factory. Dr. Englehart recommends that "In the purchase of school lands, rigid standards as to environment be considered and city ordinances passed insuring permanently a satisfactory environment for any building built subsequently on this land."

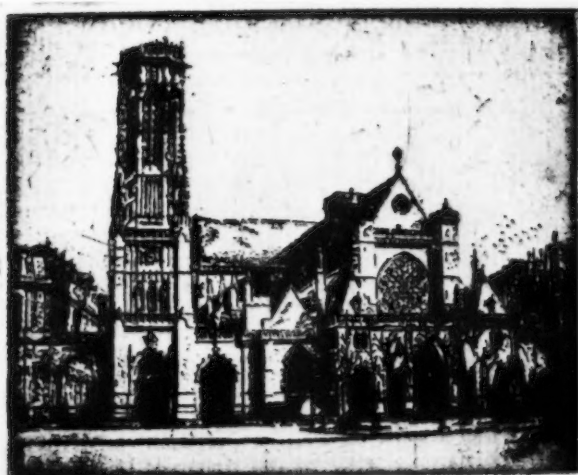
The city plan looks ahead twenty-five, fifty, one hundred years. Ideally this should be true of school planning. In reality school building is farther behind the times than any other phase of housing. The needs are increasing so rapidly that school boards think themselves fortunate if funds can be secured even to approximate present needs. One board which six years ago outlined an ambitious program, states: "Thus far our school population has increased so rapidly that we have scarcely been able to meet pres-

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ent conditions and building for the future has been almost negligible." A comprehensive, anticipatory program, however, will locate logically such buildings as may be erected under pressure of immediate need. The public authorities generally are not aware of the importance and ultimate economy of anticipating the future in school planning, in such sense as purchasing school sites in new additions in anticipation of future populations, especially if it means present outlay without immediate return. If linked with the general city plan more closely, the school building program may take on added significance in the eyes of the public, and school construction which has in the past been opportune, hasty, and often subject to "influence," may be logical, economical and purposeful.

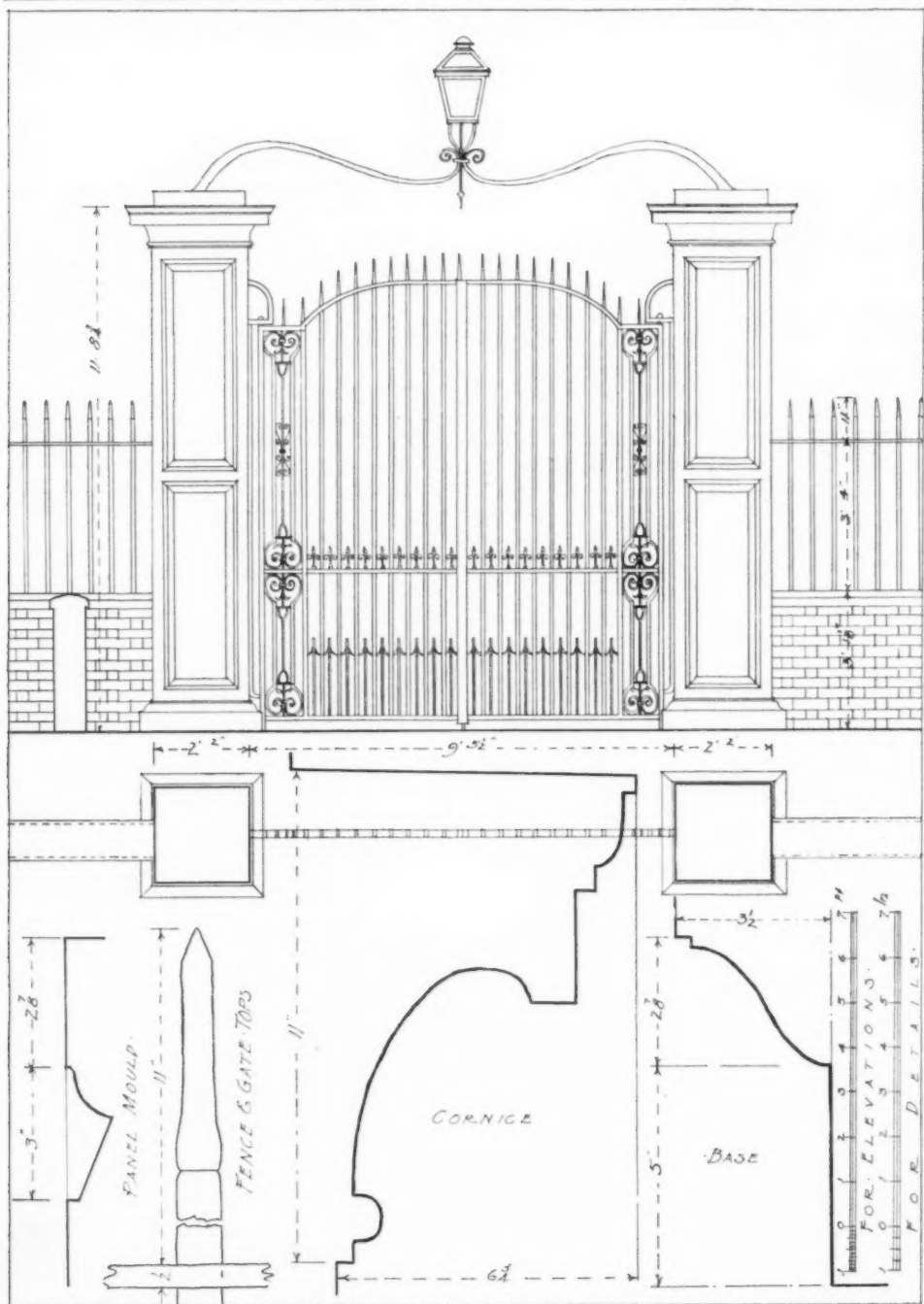
The city planner's study of street car

lines, thoroughfares, bridges, valuations, housing and, most important of all, zoning regulations, will enable him to be of inestimable aid to educational authorities in determining best school locations, not only for present needs but future development. The city planner in turn will derive reciprocal benefit from close co-operation with the school authorities, for he may no longer consider schools apart from his professional task, nor may he presume, as in the Memphis City Plan Report, "that school buildings will have been located in accordance with the distribution of school children and hence quite properly fit into the general city planning program." Schools have a duty toward the city plan, the city plan has an obligation to the schools; it is imperative that there be no shirking of responsibility on either part.



Dewitt H. Fessenden

ST. GERMAIN-L'AUXERROIS, PARIS.
ETCHING BY DEWITT H. FESSENDEN.



MATRON'S COLLEGE GATE SALISBURY, ENGLAND.
Measured & Drawn by: ROBERT M. BLACKALL

EARLY ENGLISH DETAIL and DESIGN



By
Robert M. Blackall

THE group of southwestern Midland Counties of England that march with the historic Severn and its great estuary are peculiarly rich in suggestive material for the lover of the early craftsmen's work. The Shires of Wilts, Somerset, Gloucester and Warwick, with the magnificent twelfth century Glastonbury Abbey at the southern extremity and the Shakespearean country of Stratford, the Avon and the Forest of Arden on the northern, provided the examples shown by measured drawings in this article.

No more beautiful setting for any cathedral exists than at Salisbury, in Wiltshire. There is an immense close with a wonderful lawn that took centuries to produce. In the center rises the Queen of English cathedrals, and around it are clustered many beautiful residences, reminding one of Salem or Newburyport in our own country. Like the New England house, each has its entrance gateway, three of which appear in the accompanying drawings.

The Theological College Gate is the so-called Pineapple Gate, used so much later in Colonial architecture, although with a smaller pineapple. The stone is a light grey with plain English red brick. The iron work is all square in section, the main members being $1\frac{1}{8}$ " and the smaller $\frac{1}{2}$ ".

The Archbishop's House Gate is a little more monumental in scale, though it still has the domestic feeling. The stone here is also grey and the brick the plain red English kind. The main iron members are $\frac{7}{8}$ " square, while the smaller ones are $\frac{3}{4}$ " x $\frac{1}{8}$ ".

The third gate—that of the Matron's College—is the least domestic in feeling and nearer to a college gate in scale. It is of light grey stone and plain red brick, and the sizes of the wrought iron are: 1" square $4\frac{1}{2}$ " o. c. for the side railing;

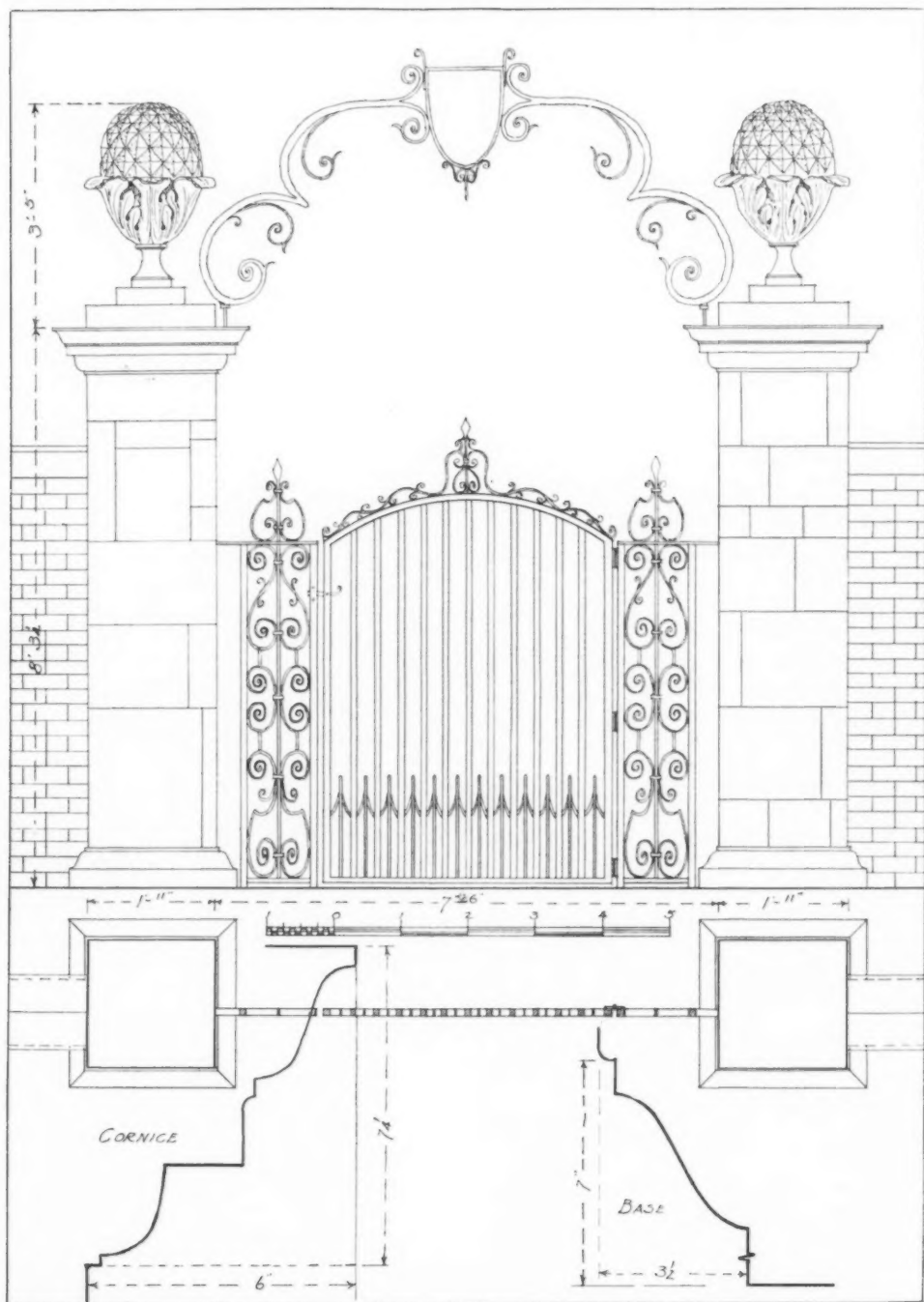
$1\frac{1}{4}$ " for the main members of the gate; $\frac{7}{8}$ " square and $\frac{7}{8}$ " x $\frac{1}{2}$ " for the intermediate ones.

Glastonbury in Somersetshire lies on the old London-to-Exeter mail-coach highway. The George Inn at Glastonbury was built in the time of Henry VII, and is a fine example of an old Pilgrim's hostelry, with several of the rooms still in their original condition.

The Pilgrims' room, on the ground floor, is the room where the guests of the inn who came to Glastonbury to visit the famous abbey were wont to sit and talk and enjoy the landlord's hospitality. As the drawings show, the room leads off from the corridor from the main entrance, and part of the half timber work of the corridor is carried around one side of the room, the other three sides being paneled to the height of six feet with rough plaster above the paneling. Two windows from a former court (now closed in) gave the only light, and on the fourth side a fireplace took up practically the entire length. The fireplace is really a large alcove with seats at each end and in the center a smaller fireplace.

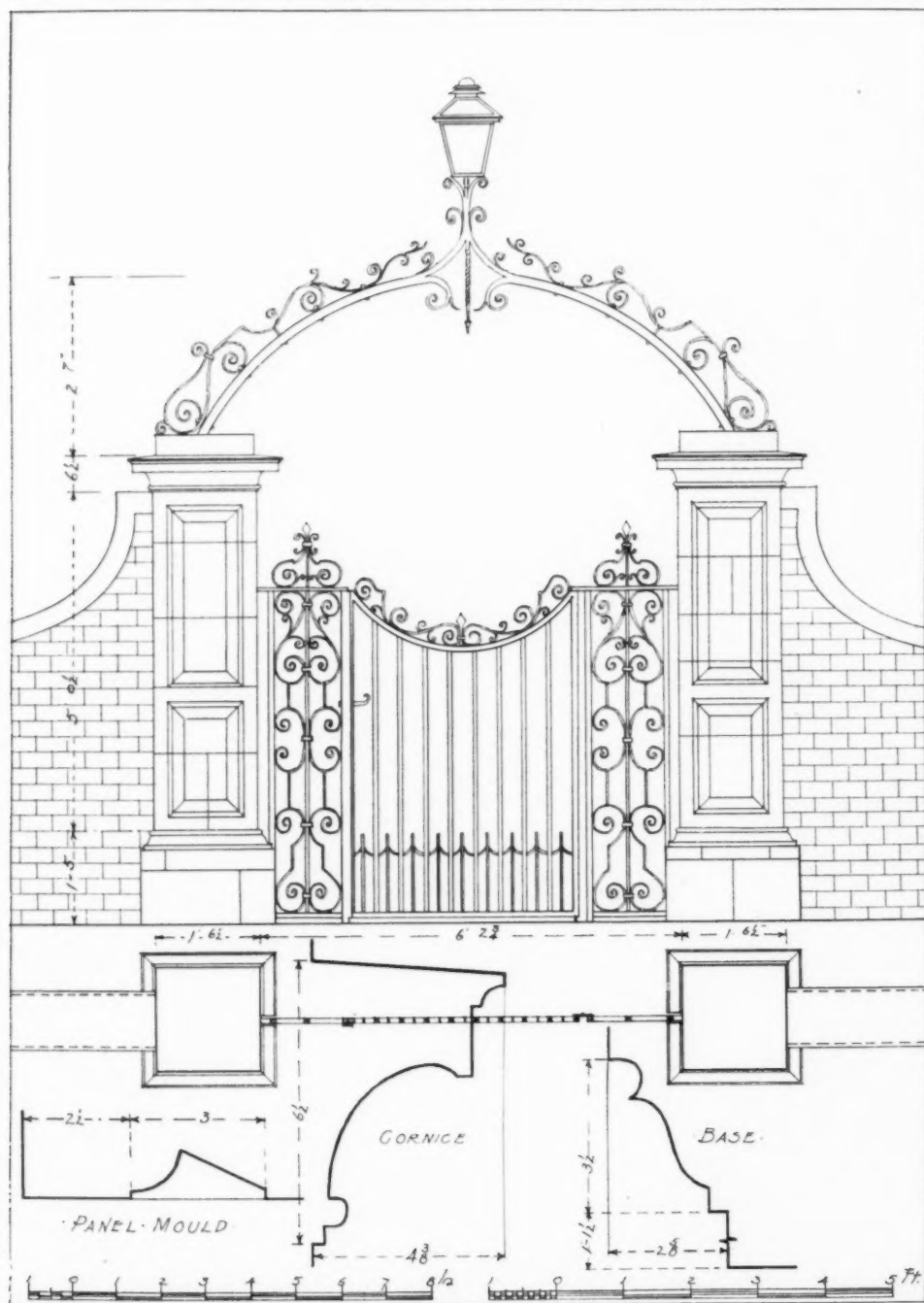
The town of Bath, not far from Glastonbury in Somersetshire, is situated on the winding Somerset Avon, in a cup or bowl, surrounded by wooded downs, up whose steep sides its buildings climb in tier upon tier of crescent, terrace and square. These, built in a dignified Palladian style, give Bath an architectural character quite its own, as a unique and harmonious creation of the eighteenth century. Mr. W. D. Howells says, with much truth, that "the houses of Bath are the handsomest in the world."

The York House is an old established hotel in the old part of Bath that is full of eighteenth century Renaissance architecture and rich in tradition. The accompanying detail is from the York House, and in character is more like our Colonial

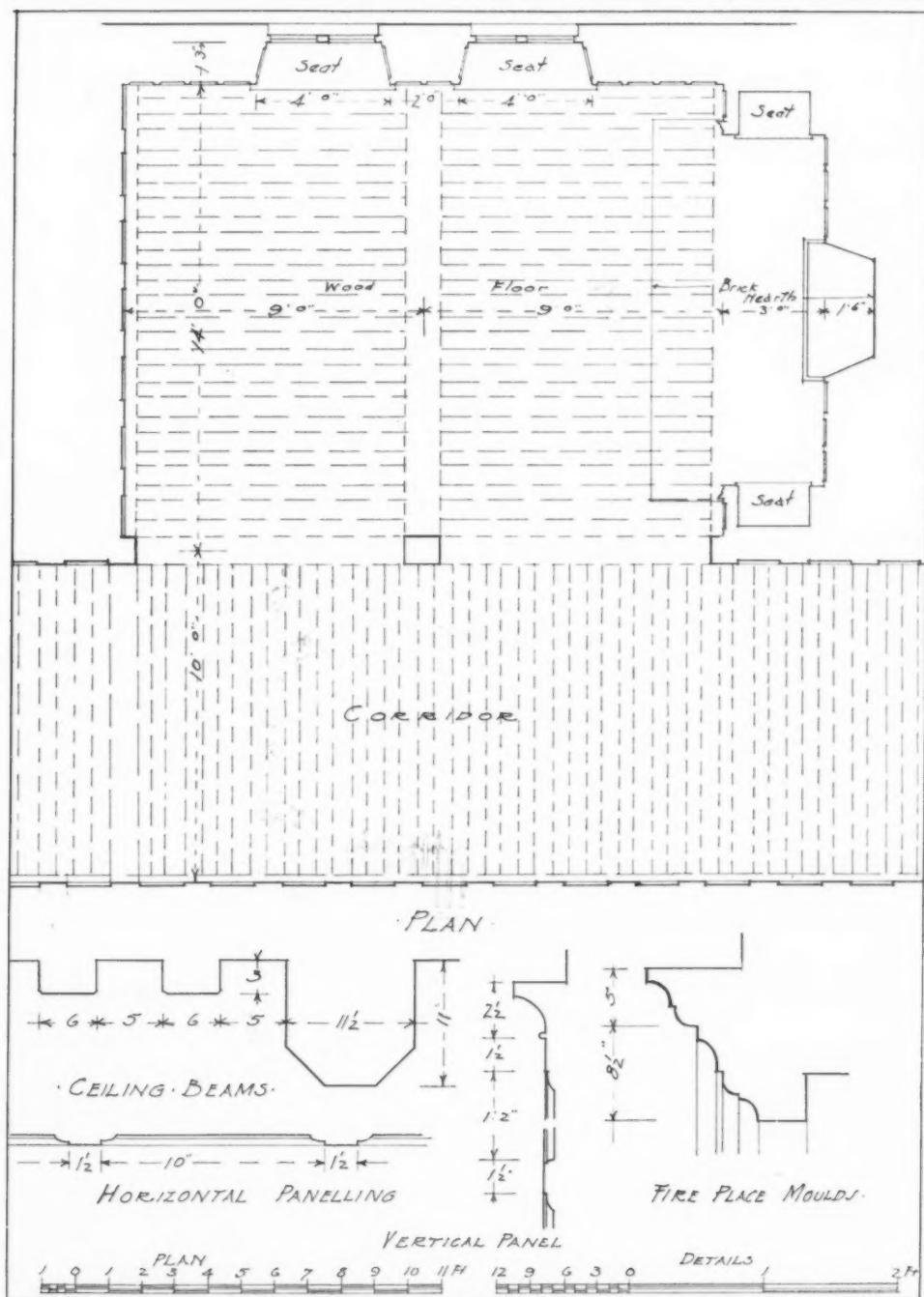


THEOLOGICAL COLLEGE GATE · SALISBURY · ENGLAND
 Measured · & · Drawn by · ROBERT · M · BLACKALL

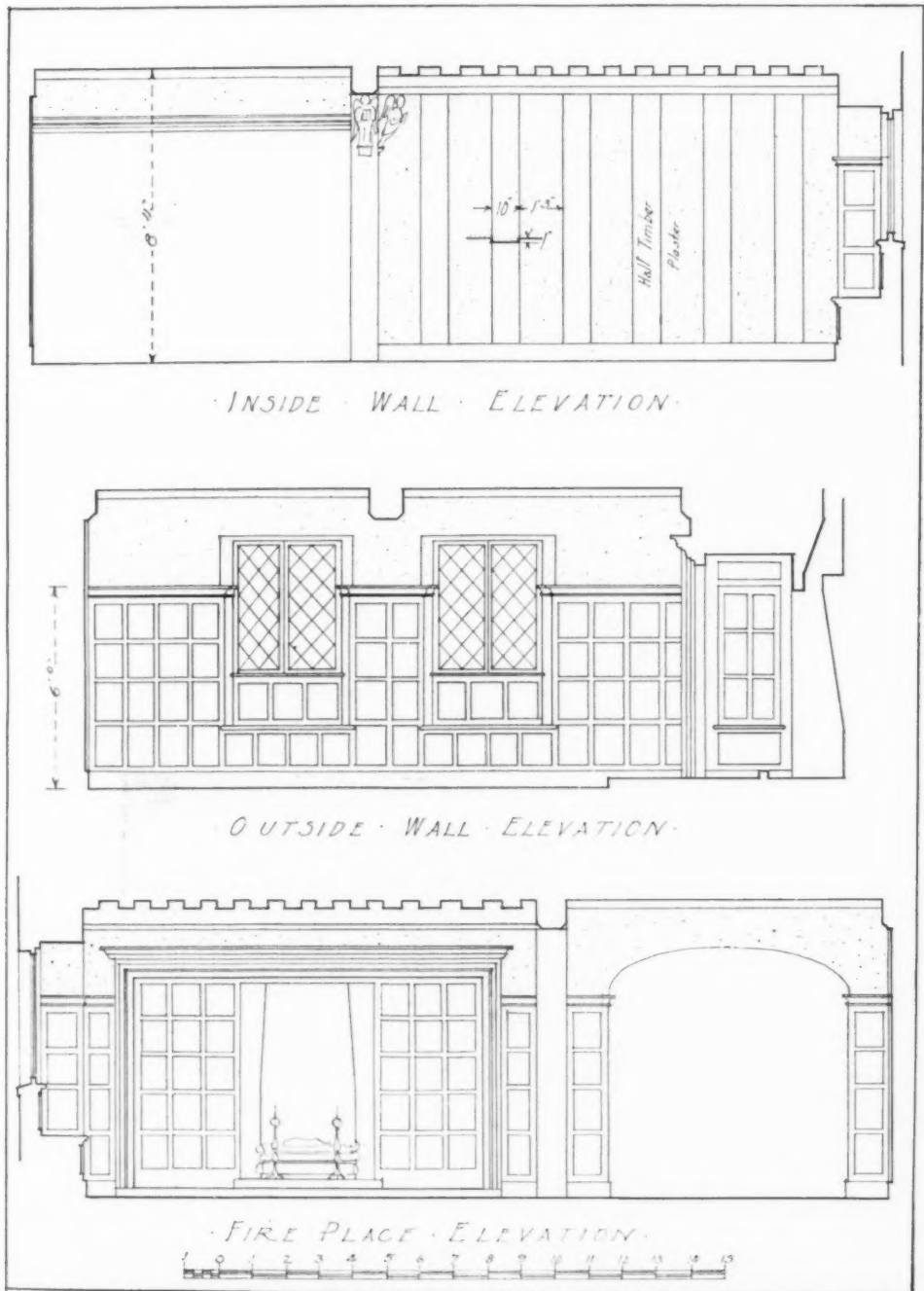
three hundred eighty-eight



ARCHBISHOP'S HOUSE GATE SALISBURY, ENGLAND.
Measured & Drawn by ROBERT M. BLACKALL.



OLD ROOM THE GEORGE GLASTONBURY
Measured and Drawn by R. H. Blackall

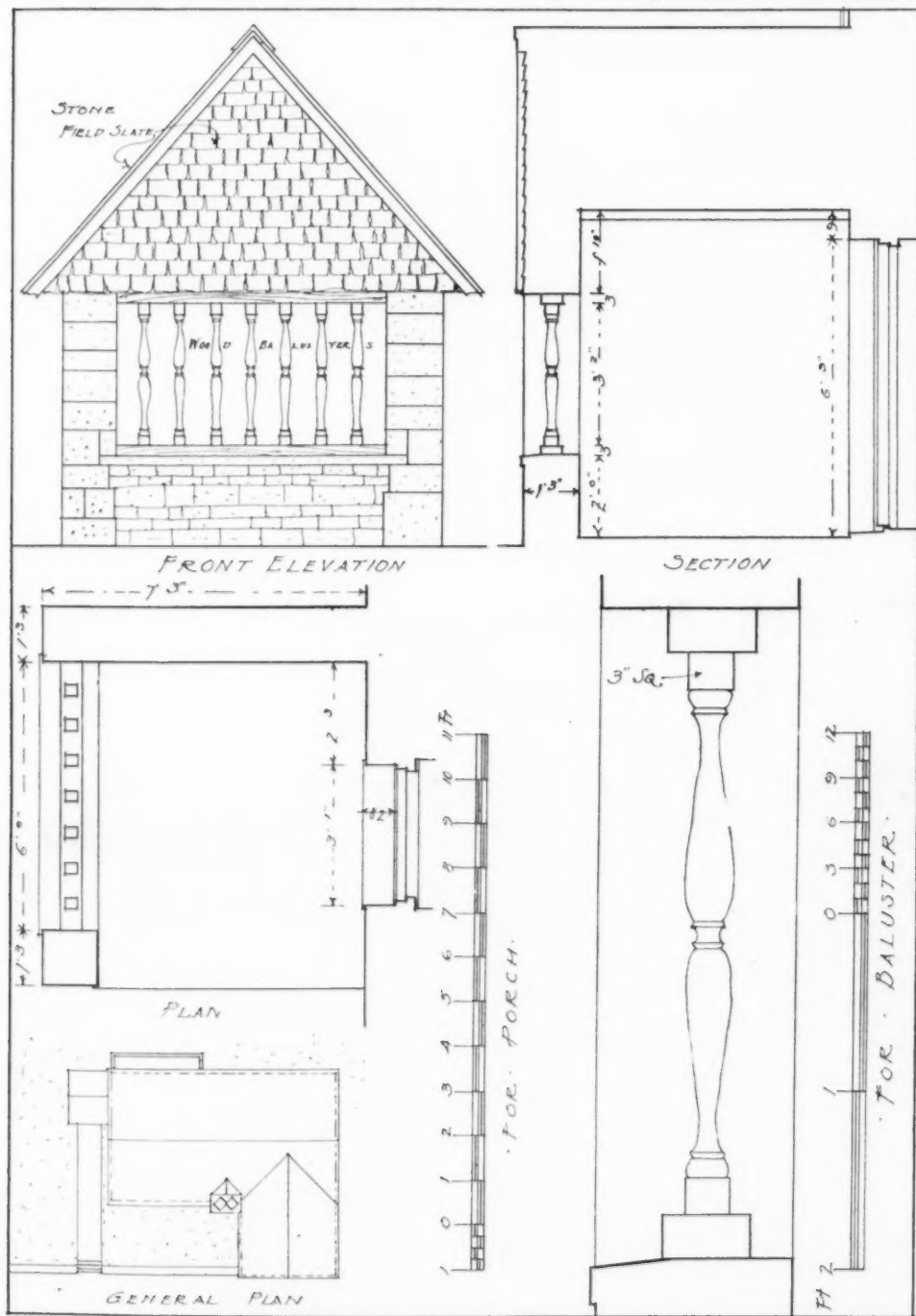


OLD ROOM. THE GEORGE GLASTONBURY
Measured & Drawn by R. M. Blackall.



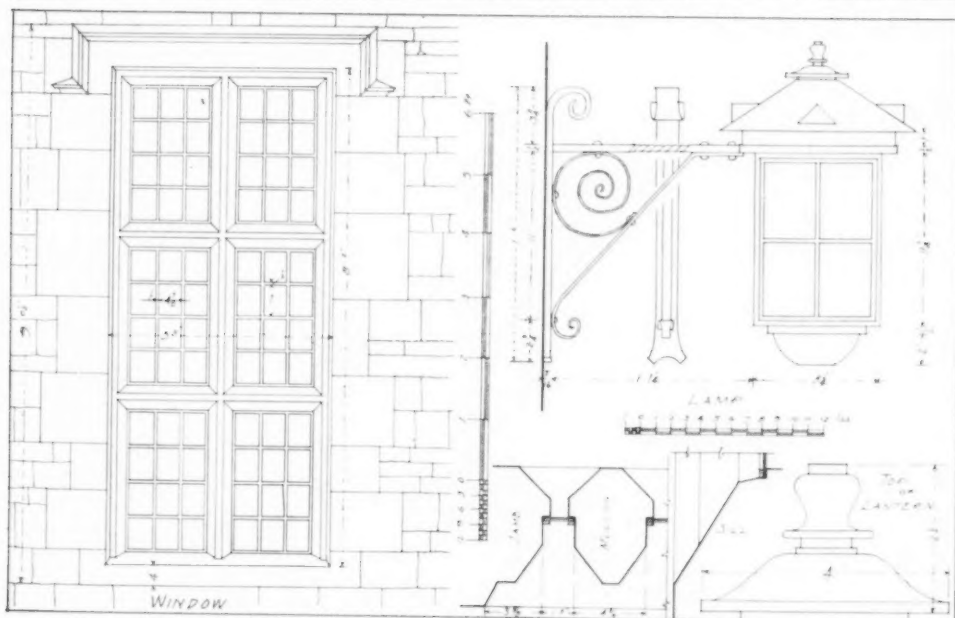
A COTTESWOLD SCHOOLHOUSE
Measured and drawn by

ASHTON-SUB EDGE
ROBERT M. BLACKALL



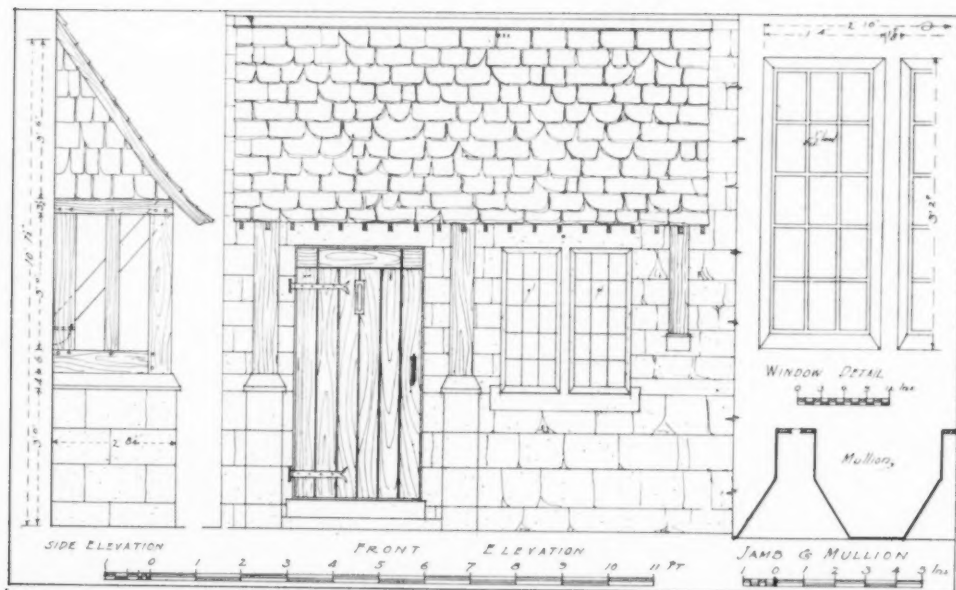
A COTTES WOLD SCHOOLHOUSE ASHTON SUB EDGE

Measured and Drawn by ROBERT M BLACKALL
three hundred ninety-three



A COTTESWOLD SCHOOL HOUSE
Measured and Drawn by

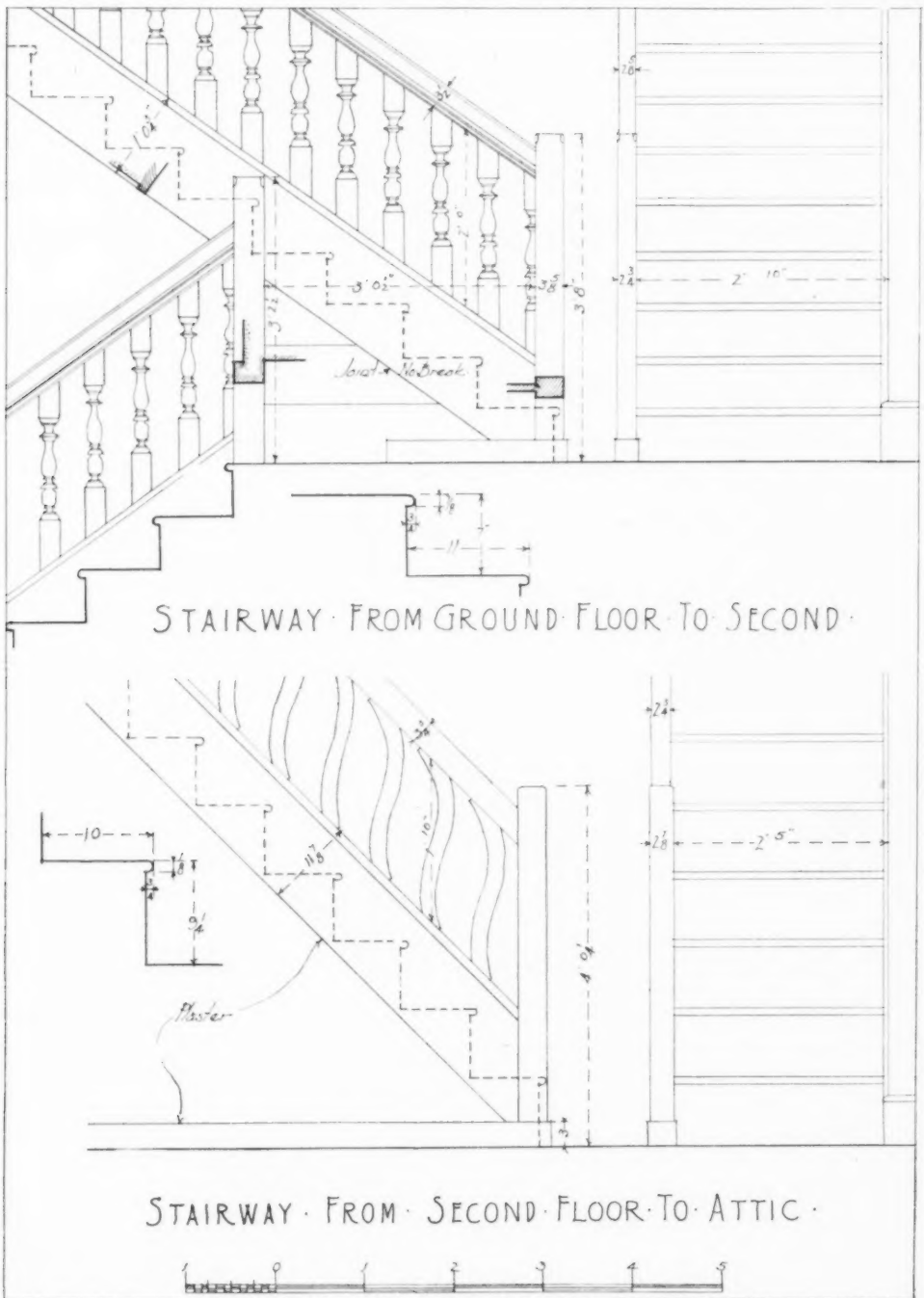
ASHTON SUB EDGE
ROBERT M. BLACKALL



HOUSE PORCH
Measured and Drawn

BROADWAY
by

ENGLAND
ROBERT M. BLACKALL

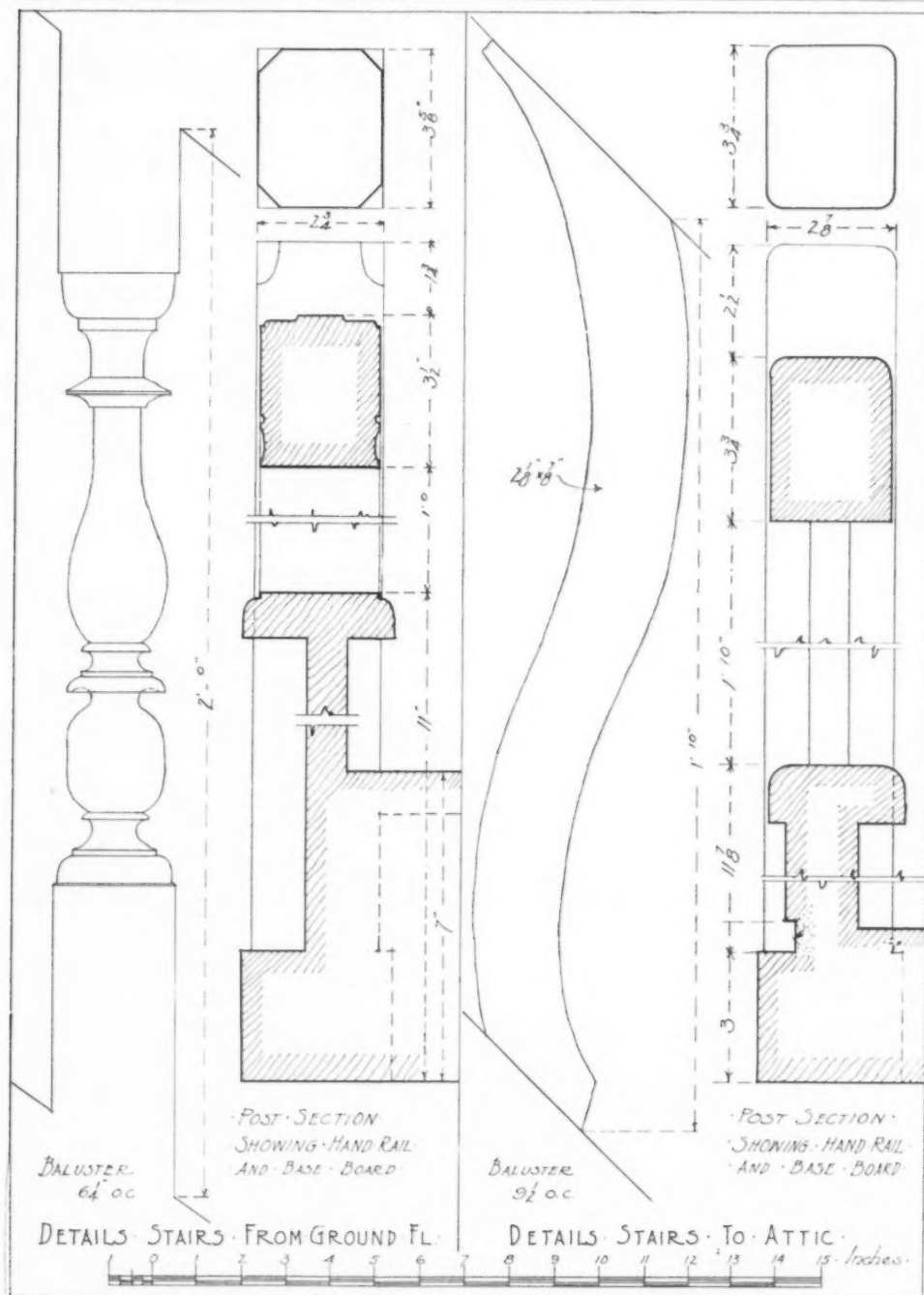


HARVARD HOUSE

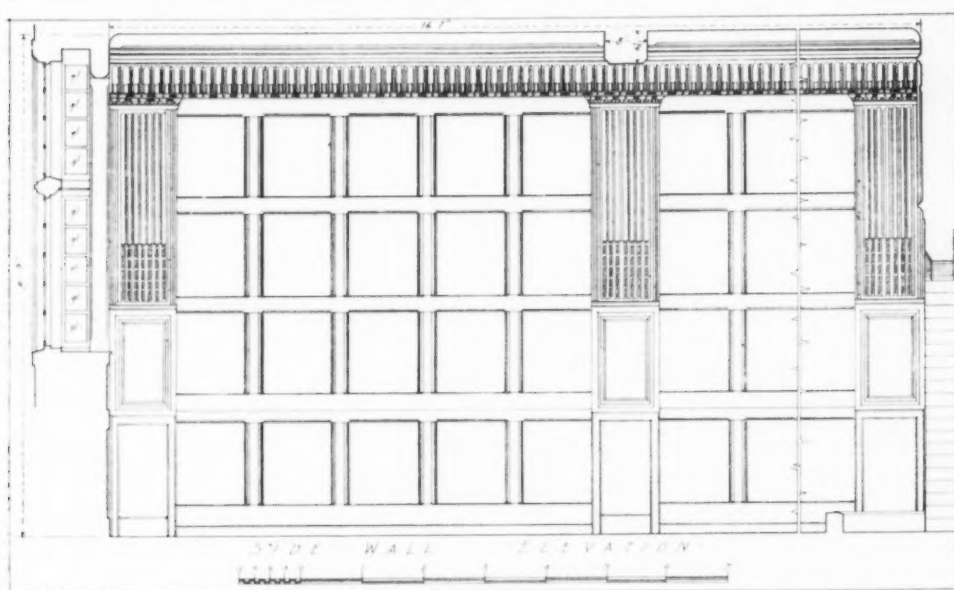
STRATFORD ON AVON

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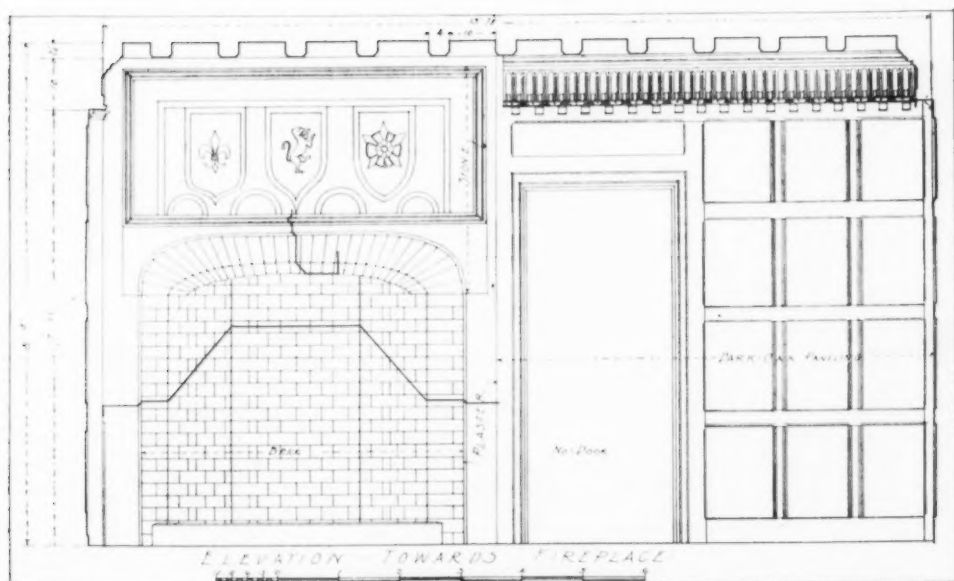
ROBERT M. BLACKALL



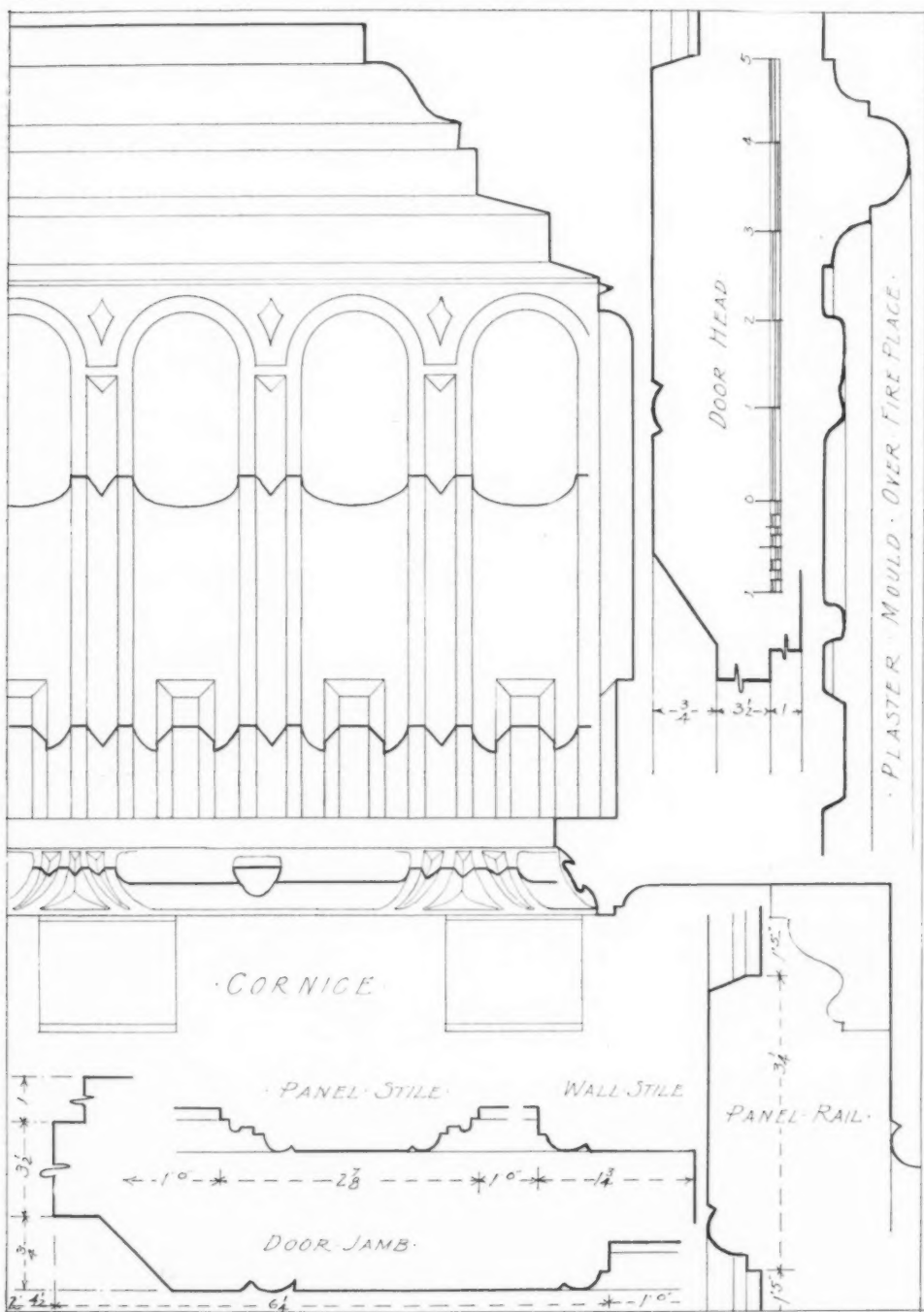
HARVARD HOUSE STRATFORD ON AVON.
Measured & Drawn by ROBERT M. BLACKALL.

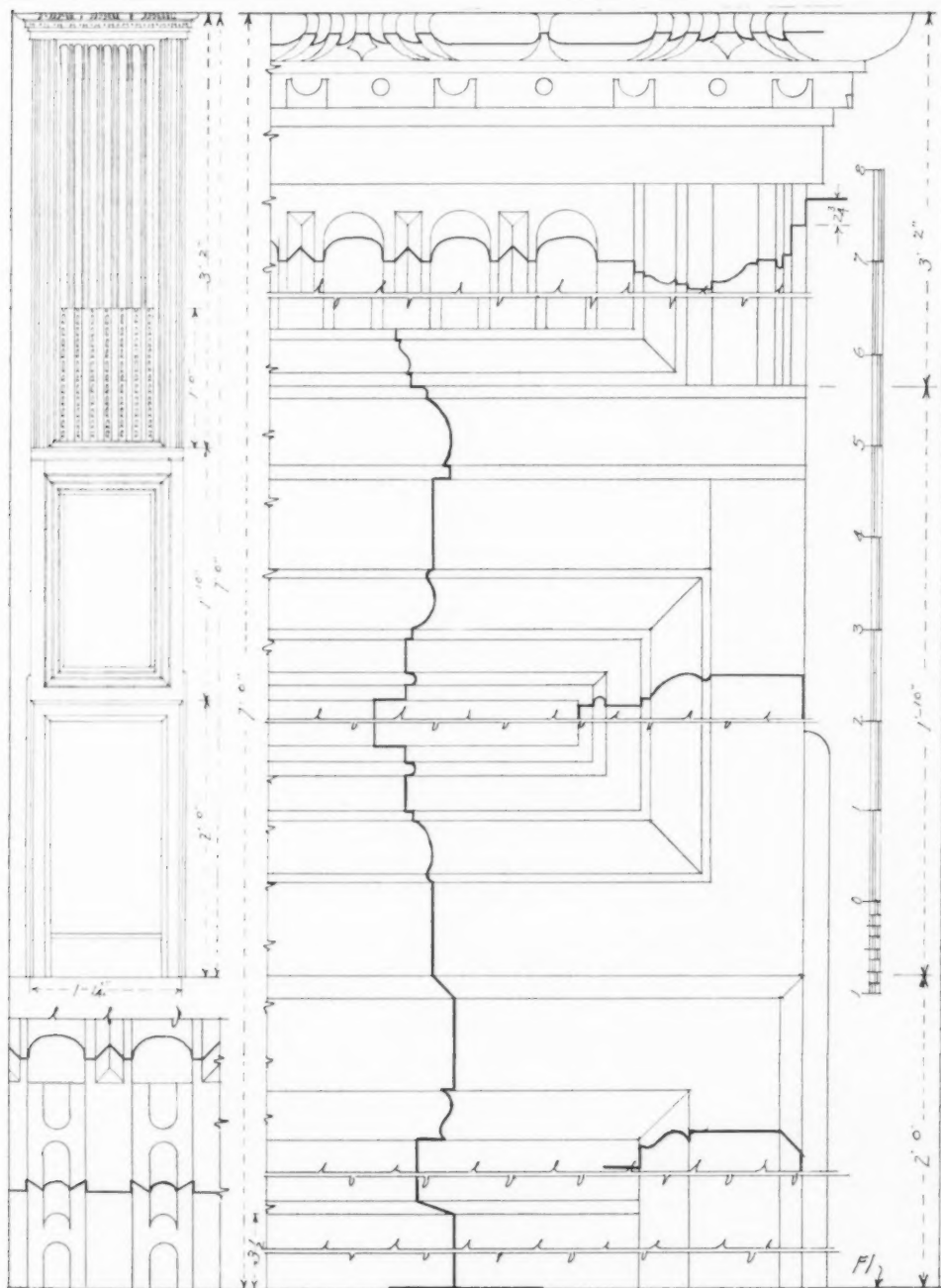


SECOND FLOOR ROOM - HARVARD HOUSE - STRATFORD ON AVON - ENGLAND.
Measured & Drawn by ROBERT M. BLACKALL



SECOND FLOOR ROOM - HARVARD HOUSE - STRATFORD ON AVON - ENGLAND.
Measured & Drawn by ROBERT M. BLACKALL





PILASTER · 2ND · FLOOR ROOM · HARVARD HOUSE ·
 STRATFORD · ON · AVON · ENGLAND ·
 Measured & Drawn · by · ROBERT · M · BLACKALL ·

architecture than eighteenth century England. Such a detail is sometimes found in the alcoves of old Colonial houses, and it is interesting to see it coming up in old houses on the other side of the water.

North of the town of Bath is Gloucestershire with its range of Cotteswold Hills, from the tallest of which one may look over the rich vales to the distant hills of Herefordshire and the verdurous expanse of the Forest of Dean.

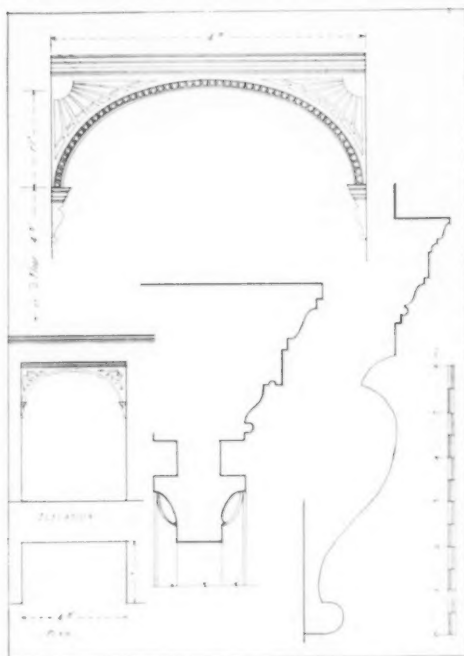
Of the small stone architecture of England there exists nowhere in that country anything that excels the small domestic types of the Cotteswold district. Built of the grey Cotteswold stone that is found everywhere in that section, and covered with the grey stone field slate, they combine charming color effects with harmonious composition.

Of such is the little schoolhouse at Ashton-sub-Edge. While it is modern and the work of one of the best architects today in England, it is exactly in keeping with the surrounding architecture, and has preserved the feeling that the older architecture gives.

The House Porch at Broadway is one of the many interesting details that one finds in the Cotteswold district, and that, in a line drawing, fail to give the richness of effect produced in the materials themselves. Built against the wall of the house for a practical reason, in the same spirit that many of the Colonial details were made in our country, this porch has more charm than many of the more elaborate details being built today. Like the rest of the buildings in this district, it is of the grey Cotteswold stone with grey stone field slate, that blends with it so well, for the roof covering.

North of Gloucestershire and the main range of the Cotteswold Hills lies Warwickshire with the Shakespearean country and the Forest of Arden. A most interesting feature is the Elizabethan brick manor, once fortified, of Compton Wynyates, so remarkably hidden in a hollow of the southern hills as to be visible only from the closest proximity on all sides.

Around the walls of the Great Hall at Compton Wynyates have been placed small wall lamps to supplement the main



ALCOVE YORK HOUSE BATH.
Measured and Drawn by R.M. BLACKALL

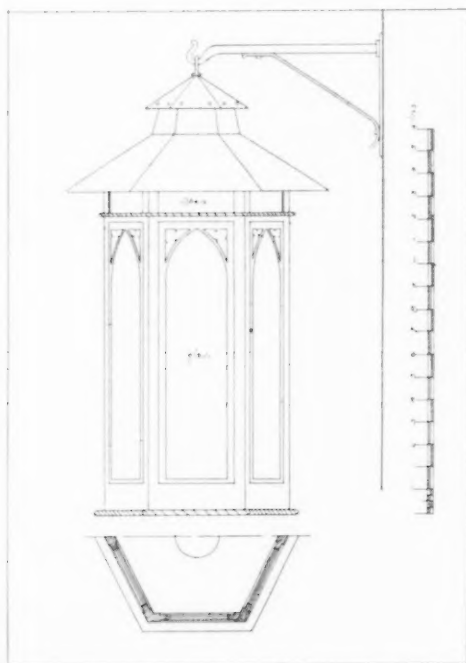
lighting and to give to the room the soft tone that only many small, subdued lights can do. They are made of rough wrought iron, hammered out, with glass of different colors. They give a very pleasing effect and add to the already charming interior that the Great Hall of this historic manor possesses.

Americans will be much interested in the Harvard House at Stratford-on-Avon in Warwickshire. In 1909 Mr. Edward Morris presented the birthplace of Katharine Rogers, wife of John Harvard, to Harvard University, shortly after the building had been brought back to its original condition under the supervision of Marie Corelli. This home has been called the Harvard House, and in it a great deal of the old work remains. Built in 1596 in the half timber style which is so prevalent in the Shakespearean country, the present condition is as nearly like the original as it is possible to make it. The accompanying stairs are said to be, in part at least, the original stairs that were in the building at the time of its construction. The balusters,

four hundred

which in spirit are quite late Elizabethan or early Jacobean, clearly show them to be of the same date as that of the building of the Harvard House, which was brought back to its original condition about the year 1909. In the remodeling much of the beautiful old paneling was uncovered and was refinished in as near the old condition as was possible. The accompanying measured drawings of the second floor room of the Harvard House show the original paneling and fireplace,

dating from the early part of the seventeenth century. The woodwork is in excellent state of preservation and the fireplace intact. The paneling is dark stained oak. The plaster is slightly rough and tinted a dull white. The stone is quite soft and of a pink color. The bricks are plain, ordinary red English bricks. The room has excellent proportions, being 13 feet 7 inches wide, 16 feet 7 inches long and 8 feet $\frac{1}{2}$ inch high, and could well be adapted to a modern country house.



WALL LAMP COMPTON WYNTATES ENGLAND
Measured and Drawn by ROBERT M. DUNNALL



DOOR DETAIL—NO 8 SUTTON SQUARE, NEW YORK. MURPHY & DANA, ARCHITECTS.

~ The TOWN HOUSE of a NEW RÉGIME ~
Numbers 6 & 8 SUTTON ST., NEW YORK CITY



B. HAROLD DONALDSON EBERLEIN

THE city house, taking it by and large, for too long a time was the ugly duckling of domestic architecture. That we have entered well into a new régime in which the ugly duckling is growing into a swan, is a fact from which no little satisfaction is to be derived—a fact, however, that still needs to be emphasized for the benefit of the general public.

Among both architects and clients, for a long period from which we are now fast emerging, there was too acquiescent an acceptance of the limitations and difficulties attending the design and building of town houses, too yielding a disposition to regard the case as not sufficiently promising to reward the same amount of effort that would be ungrudgingly bestowed elsewhere. Yet, despite the dead weight of past apathy, there are many unmistakable evidences that the town house is rapidly coming into its own again.

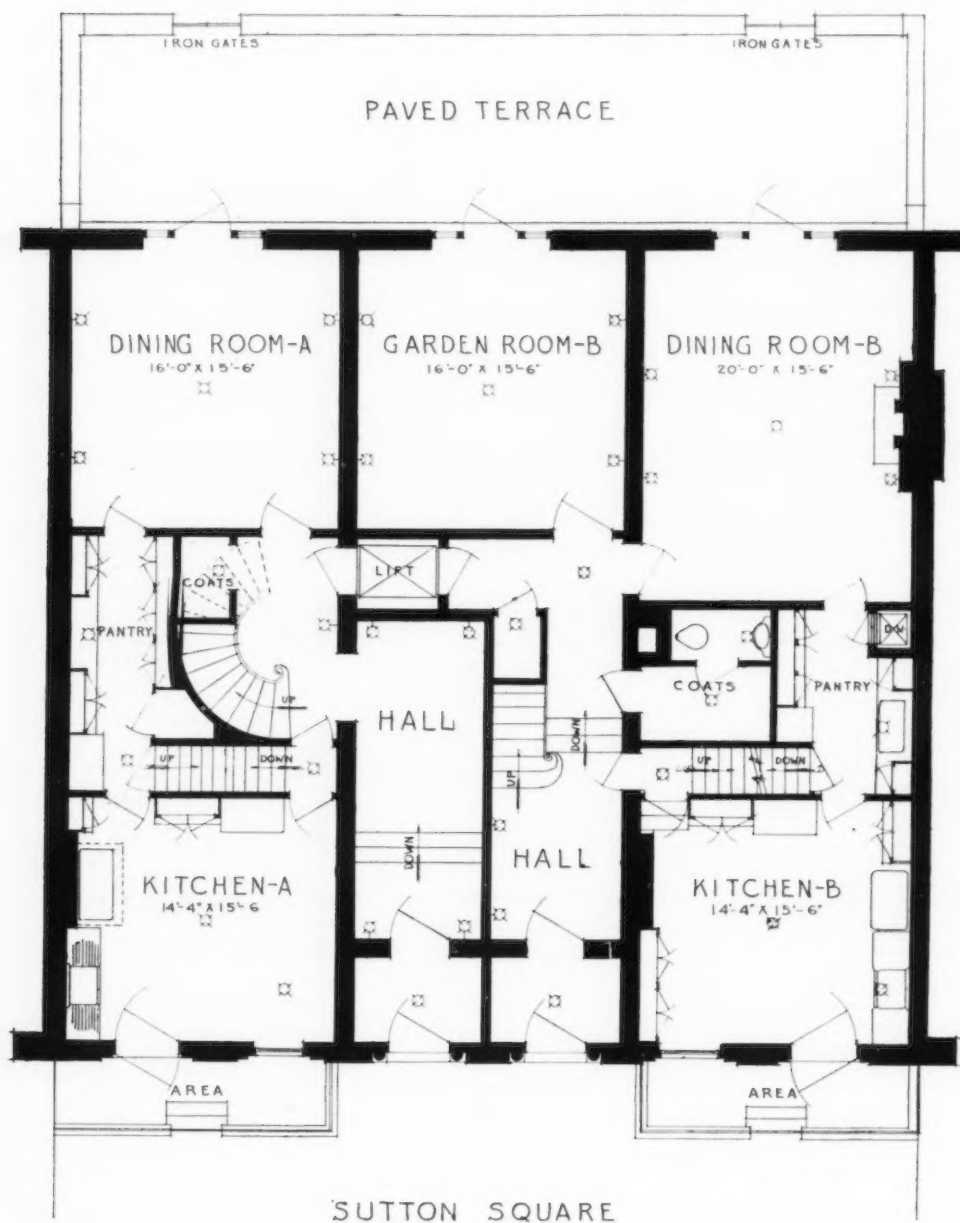
It is easy to understand why the town house once sank to a distinctly subsidiary place, and why the country house and the suburban house absorbed the lion's share of attention in the public eye at the expense of city architecture. The country and the fast developing suburbs of our larger cities afforded a comparatively virgin field to be exploited and, under the strong impetus of new social habits that encouraged residence away from the immediate centres of population and business during at least a portion of the year, it was but natural to take advantage of the freedom from hampering restrictions and concentrate new enterprise and the play of invention where they would produce the most telling effects.

On the other hand, the average city house—especially in our older cities—had apparently reached a more or less crystal-

lized state which, from sheer force of the numbers concerned, seemed incapable of much further development and lacked an appeal to the imagination unless a process of wholesale demolition and reconstruction were to be undertaken—a process for which, at the time, no one was prepared. Furthermore, city lots were more or less uniform in shape and size and, consequently, the plan of city houses more or less pre-determined and the type fixed, whether the houses were erected by individuals for their own occupancy or whether they were undertaken in numbers on a speculative basis. Worst of all, the great majority of such city houses were built at a period when domestic architecture was assuredly not of an inspired sort, or of a character calculated to arouse any enthusiasm in a later generation. The expanses of city area covered by rows of such banal or even positively ugly dwellings, all closely similar in their chief externals, therefore created an unfortunate tradition and bred a widely prevalent feeling that the architecture of the city house of average size did not offer much opportunity for interesting or original treatment. Such a deeply-rooted feeling, unreasonable though it might be, could only discourage architectural effort and make matters worse than they really need have been. If anything interesting was to be done in the way of domestic architecture, the client generally sought some other field and the architect acquiesced in the client's choice.

Leaving out of account the large and manifestly expensive city mansions that first broke this dismal tradition of the mid-Victorian era, there grew up well within the bounds of general recollection a movement destined to effect the architectural regeneration of the average-sized and small town house. Eventually this

COMMUNITY GARDENS OVERLOOKING EAST RIVER



FLOOR PLAN—NOS. 6 AND 8 SUTTON SQUARE,
NEW YORK. MURPHY & DANA, ARCHITECTS.



STREET FRONTS—NOS. 6 AND 8 SUTTON SQUARE,
NEW YORK. MURPHY & DANA, ARCHITECTS.



GARDEN FRONT

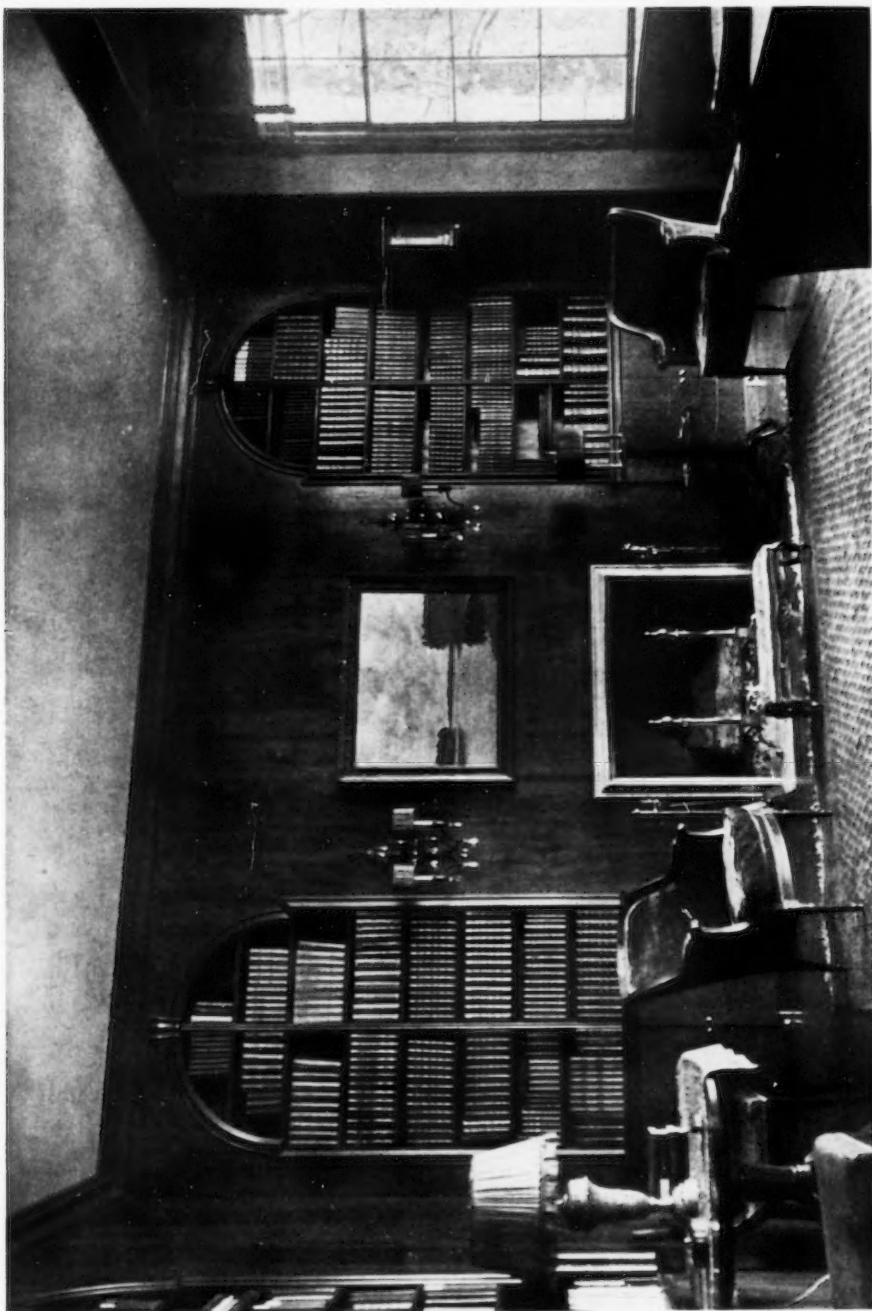
ELEVATION OF GARDEN FRONTS—NOS. 6 AND 8 SUTTON
SQUARE, NEW YORK. MURPHY & DANA, ARCHITECTS.



GARDEN FRONTS—NOS. 6 AND 8 SUTTON SQUARE,
NEW YORK. MURPHY & DANA, ARCHITECTS.



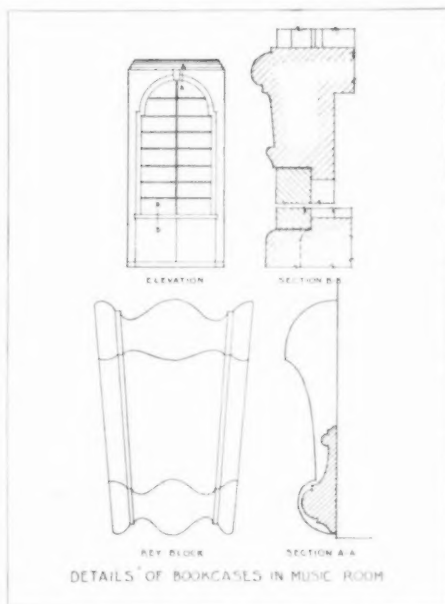
DINING ROOM—NO. 6 SUTTON SQUARE,
NEW YORK. MURPHY & DANA, ARCHITECTS.



DRAWING ROOM—NO. 8 SUTTON SQUARE,
NEW YORK. MURPHY & DANA, ARCHITECTS.

was destined to reclaim districts that had long since been relegated to slums and small streets that had erstwhile been devoted to stables that were not used, or to garages that could just as well have been elsewhere. First came the sporadic remodeling of houses along the lesser thoroughfares. Next came the turn of the little streets—once contemptuously termed “back” streets—and finally the reclamation of whole blocks that had long since settled into a hopeless, dingy, third-rate existence. In past years THE ARCHITECTURAL RECORD has duly chronicled the work of Richard Arnold Fisher in rehabilitating Lynde Street and Brimmer Street, in Boston; of similar undertakings by various architects in some of the smaller and long-neglected streets of Philadelphia; of sundry other works of like character; and, most recently of all, the enterprise or re-making of nearly a whole city block, in the Turtle Bay project executed by E. C. Deane and William Lawrence Bottomley.

Economic considerations, and most chiefly the necessity for using over again more wisely the city spaces previously covered by wasteful, sprawling building, have gradually compelled us to adopt a saner attitude and study the subject of town house building from a fresh angle. Under the urge of inexorable necessity we are perforce constrained to heed the excellent precedents of our own early domestic city architecture and the older city dwellings of England and foreign countries. This renewed study has brought a somewhat belated but none the less wholesome realization of what a far-sighted minority always knew but the majority of the American public had hitherto ignored in a prodigal way—that the average domestic architecture in cities affords just as much scope for sound invention and interesting disposition as does the freer rural and suburban field. There has been too much sprawling and too little popular realization of the desirability of producing excellence in small, compact neighborhoods where every foot of ground had to be made to yield its utmost return. Indeed, the very limitations inseparably attending the problem of city building prove a stimulus and incentive



to the capable architect to exercise his utmost ingenuity and resourcefulness. There is always more credit to be gained—and incidentally more satisfaction—and greater mastery to be acquired from the experience in making something worth while where the subjects to work upon and the materials to work with are apparently least promising.

One of the most recent and edifying examples of the process of regeneration in town house architecture is to be seen in the pair of houses at numbers 6 and 8, Sutton Square, New York City, on the bank of the East River. This particular district has come within a private scheme of reclamation enterprise. The work immediately under consideration involved an extensive process of remodelling and making over three houses into two dwellings. The street frontage was used for access, but the principal frontage, overlooking a common garden and commanding a broad view of the river, was made out of what were formerly the back buildings. As the accompanying plans show, the available space was ingeniously divided so that each house should have an equal allotment of large desirable rooms overlooking the river. This necessitated what might be

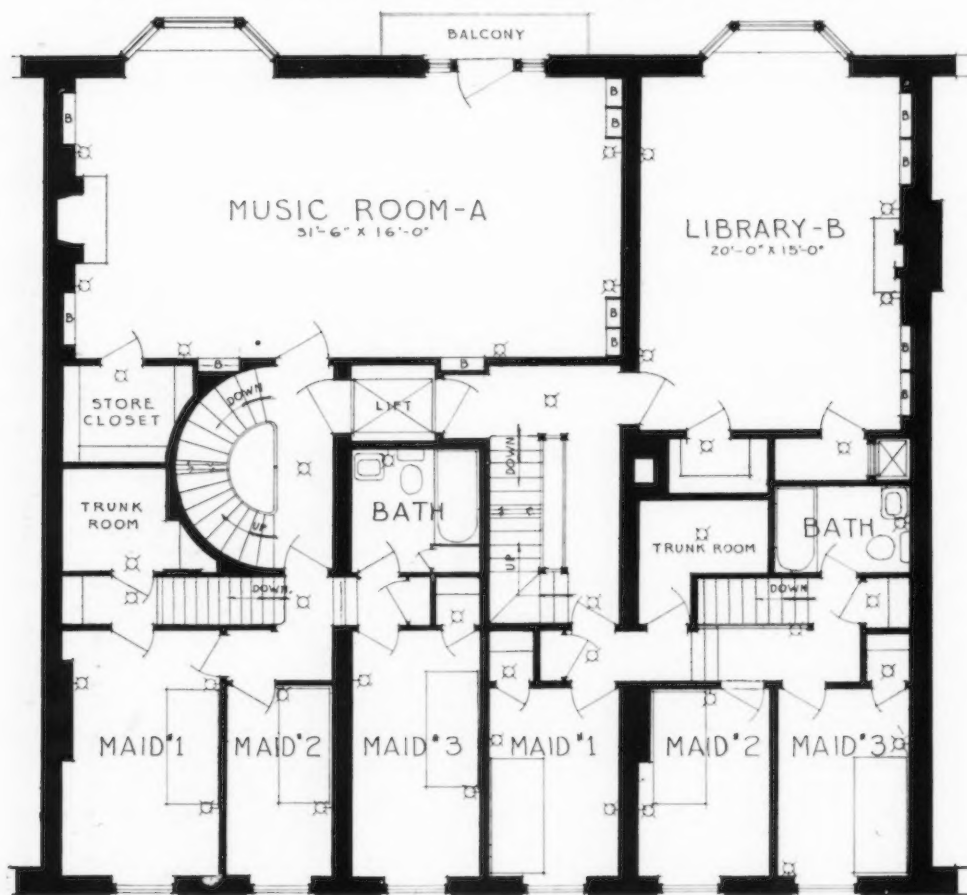
four hundred ten



DRAWING ROOM—NO. 6 SUTTON SQUARE,
NEW YORK. MURPHY & DANA, ARCHITECTS.



COMMUNITY GARDENS OVERLOOKING EAST RIVER



SUTTON SQUARE

SECOND FLOOR PLAN—NOS. 6 AND 8 SUTTON SQUARE,
NEW YORK.

MURPHY & DANA, ARCHITECTS.



HALLWAY—NOS. 6 AND 8 SUTTON SQUARE,
NEW YORK. MURPHY & DANA, ARCHITECTS.

termed an interlocking plan. Exactly how it works may be seen by studying the elevation where the division lines between the houses are indicated. There is not one vertical line of division between the two houses, as is usually the case in a pair of dwellings, but the line is broken so that one story of the first house overlaps the lower story of the next, while a compensating overlapping takes place above, each dwelling thus containing an equal amount of floor area. The device is extremely ingenious and deserves close study, as the same arrangement may well be applied in other more or less similar instances. The principle, so far as the writer is aware, has not been used elsewhere in America. In actual practice it has worked out exceedingly well, has produced the desired results, and is obviously susceptible of further advantageous development in similar cases.

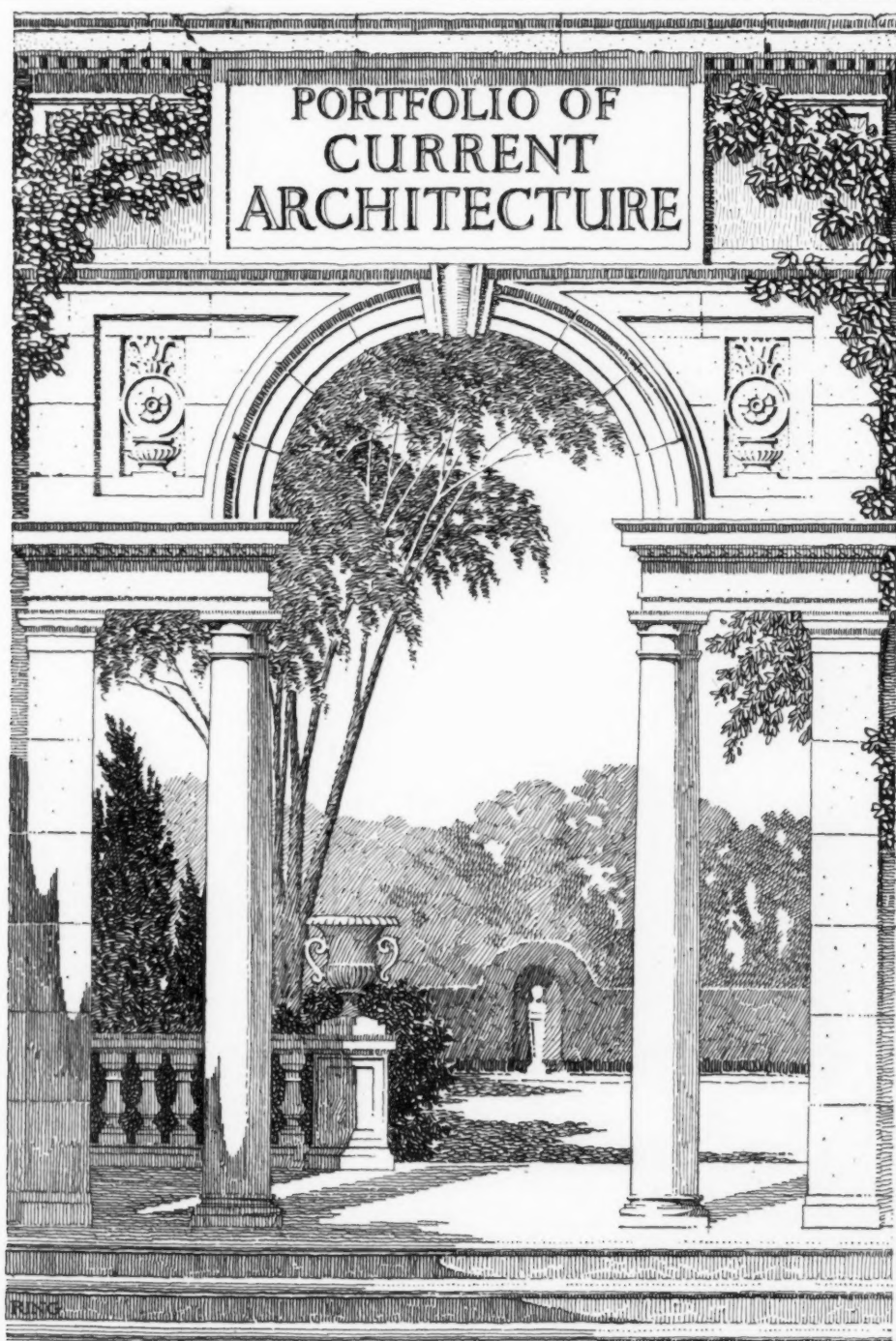
In style, these houses are of late eighteenth century type and have been treated with a most engaging urbanity of manner. The exterior illustrations speak for themselves, so far as the architectural mode is concerned, but note must be taken of the coloring and of the interior treatment. The brick is the old brick used in the former exteriors and not too scrupulously cleaned of adhering particles of mortar and plaster, so that an agreeable texture has been preserved. The doors are painted a dark grey blue, corresponding with the bluest tinge in the plum-colored brick of the walls. The knobs are of *solid* brass, a fact worth noting because the texture, color and sheen of the metal are different from the same phenomena when the hardware is plated or lacquered.

In the drawing-room of Number 6, the walls are painted grey green while the mouldings are painted a light yellow. The mantel is of yellow Siena marble. In the

dining-room of Number 6 the walls are of light yellow and there are no mouldings standing out in actual relief. Instead, the mouldings are *painted* in a pale peach color, with one broad line, one inch wide, and two narrow lines, one quarter of an inch wide. Thus contrasting color is made to take the place of actual projection, with excellent effect.

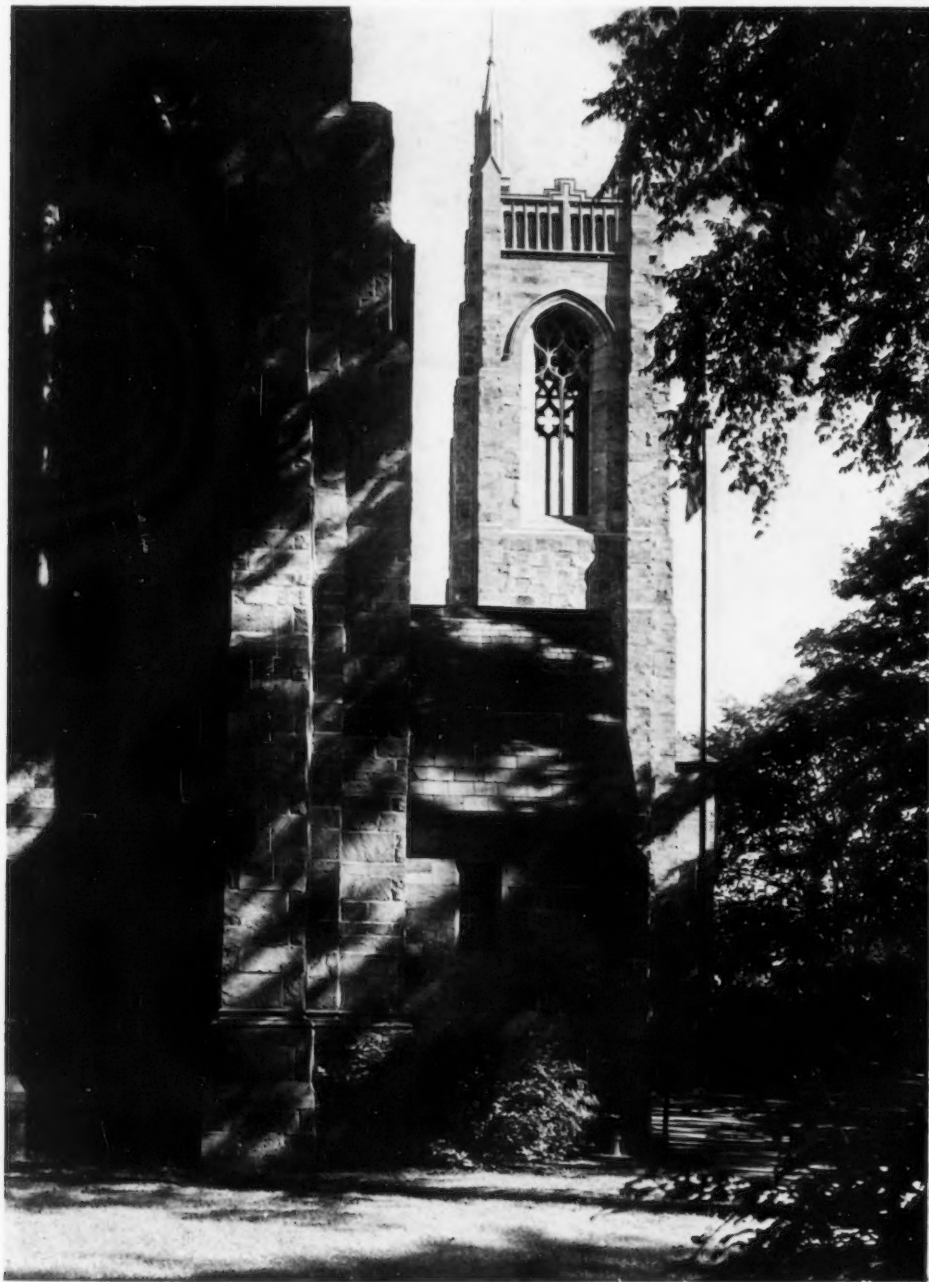
In the drawing-room of Number 8 the walls are covered with red gum vertical boarding, waxed. The detail of the bookshelves is shown in the accompanying drawing. In the hallway illustrated, the narrow panels are of old yellow, the broad bands are of light tobacco brown, the base is of dark green marbleized, and the rest of the decoration is executed in grisaille of a cool tone. This decoration, it should be noted, was painted by Allyn Cox. The fixtures are black and gold, and the furniture is dark green and gold.

The foregoing notes will serve to convey a sufficient notion of the general scheme of decoration followed. This scheme is interesting in itself, but apart from its own intrinsic interest, it is highly significant because it flatly challenges the popular obsession, unwarranted but prevalent, that it is improper to use anything in late Georgian houses that departs very far from a dull mediocrity of cream-colored or grey paint; very admirable colors, in themselves, and *safe*, but tiresome in the extreme when universally employed. As a matter of historical fact, a great number of bright and interesting colors were commonly employed in this period and the architects have done a real service in making use of them in this instance. Both in the matter of decoration and in the ingenious plan followed, the houses in Sutton Square merit close examination on the part of all who are in any way concerned with domestic architecture in cities.





TRINITY CHURCH, SYRACUSE, NEW YORK. CLARENCE
WILSON BRAZER AND E. DONALD ROBB, ARCHITECTS.



TRINITY CHURCH, SYRACUSE, NEW YORK. CLARENCE
WILSON BRAZER AND E. DONALD ROBB, ARCHITECTS.



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CUMBERLAND STREET HOSPITAL, BROOKLYN,
NEW YORK. LUDLOW & PEABODY, ARCHITECTS.

four hundred nineteen



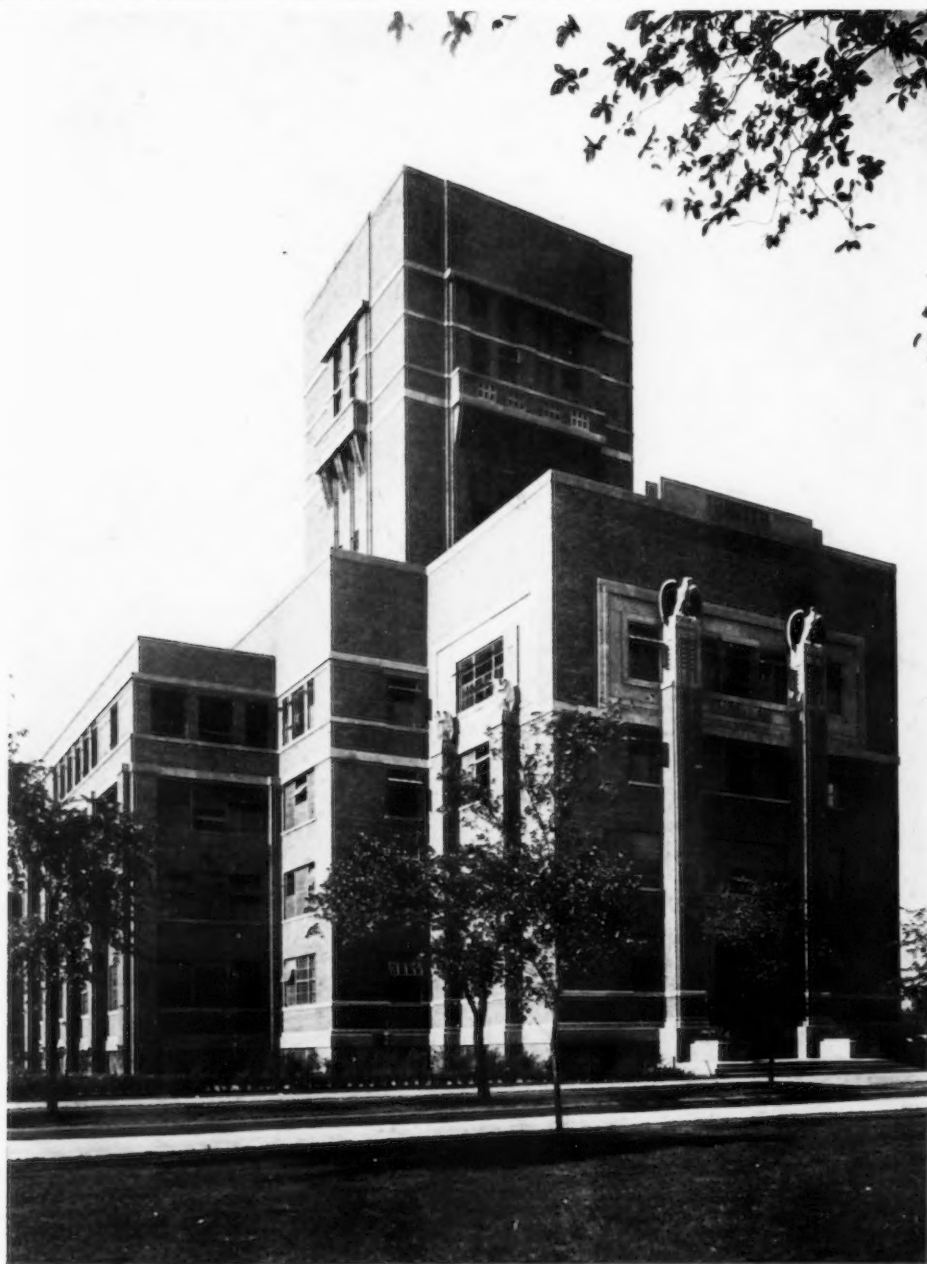
CUMBERLAND STREET HOSPITAL, BROOKLYN,
NEW YORK. LUDLOW & PEABODY, ARCHITECTS.



CUMBERLAND STREET HOSPITAL, BROOKLYN,
NEW YORK. LUDLOW & PEABODY, ARCHITECTS.



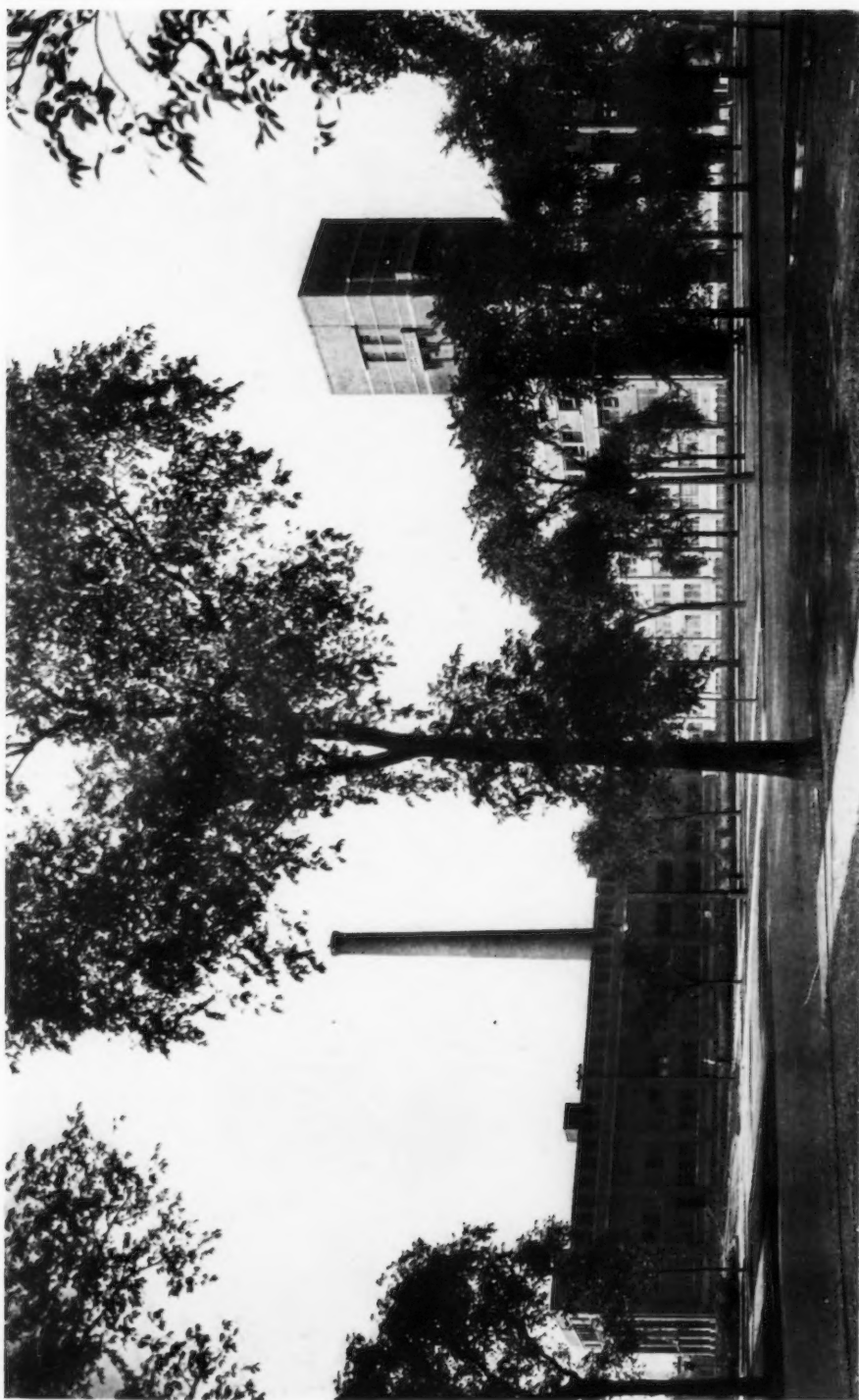
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NEW YORK. LUDLOW & PEABODY, ARCHITECTS.



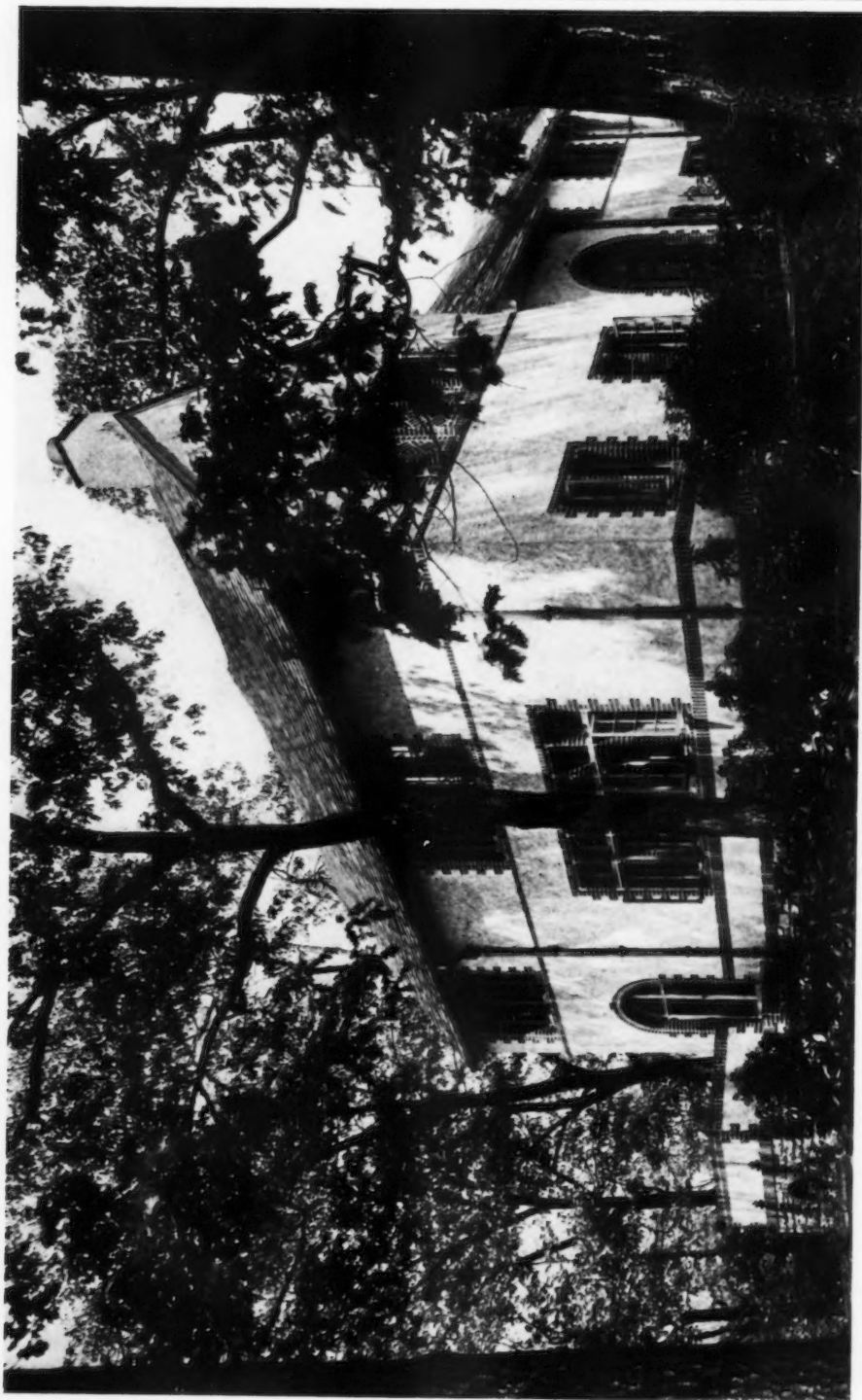
BUNTE BROTHERS' CANDY FACTORY, CHICAGO,
ILL. SCHMIDT, GARDEN & MARTIN, ARCHITECTS.



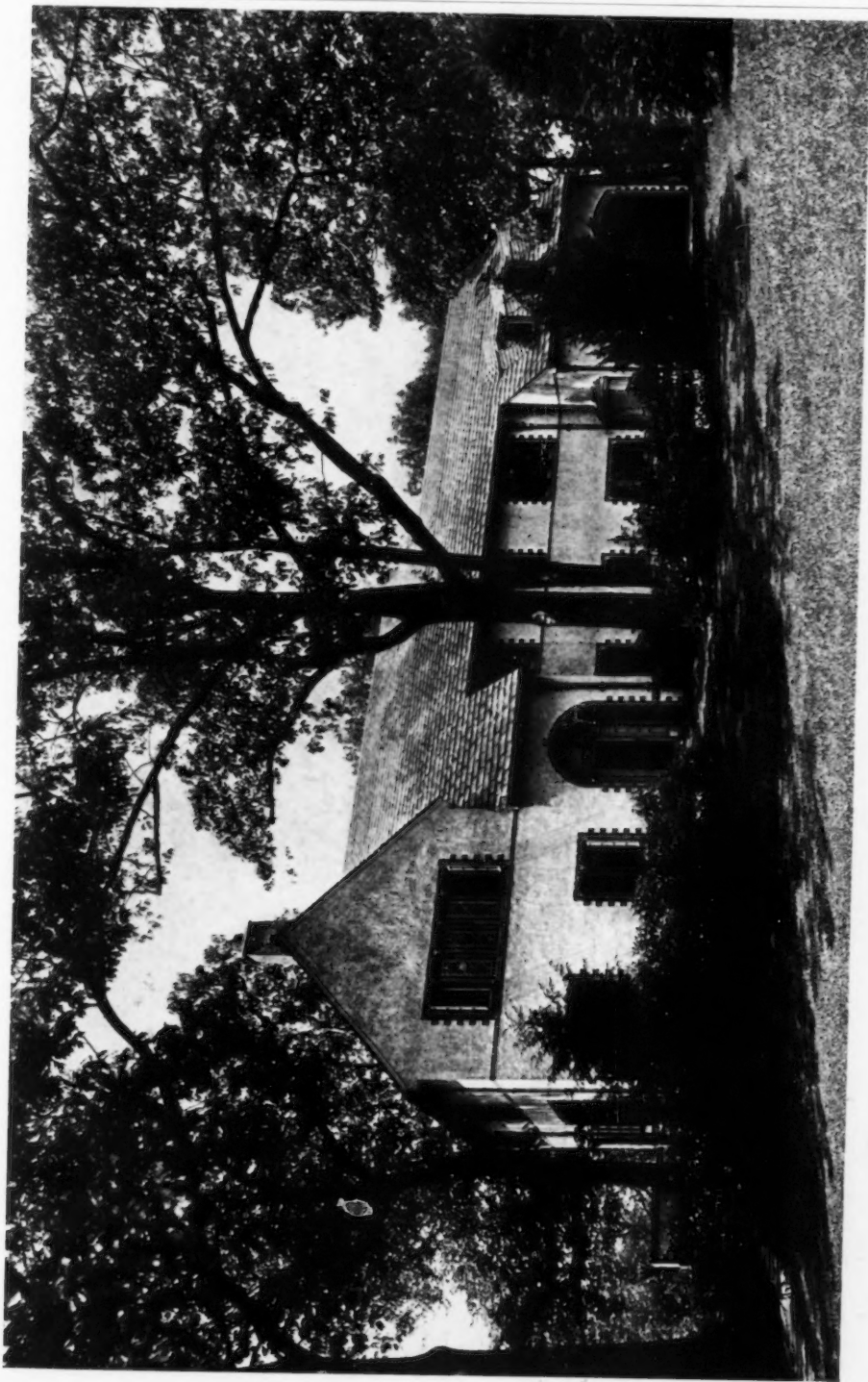
BUNTE BROTHERS' CANDY FACTORY, CHICAGO,
ILL. SCHMIDT, GARDEN & MARTIN, ARCHITECTS.



BUNTE BROTHERS' CANDY FACTORY, CHICAGO,
ILL. SCHMIDT, GARDEN & MARTIN, ARCHITECTS.



RESIDENCE OF WALTER KELLEY, ESQ., RIVERDALE,
N. Y. GEORGE B. POST & SONS, ARCHITECTS.



RESIDENCE OF WALTER KELLEY, ESQ., RIVERDALE,
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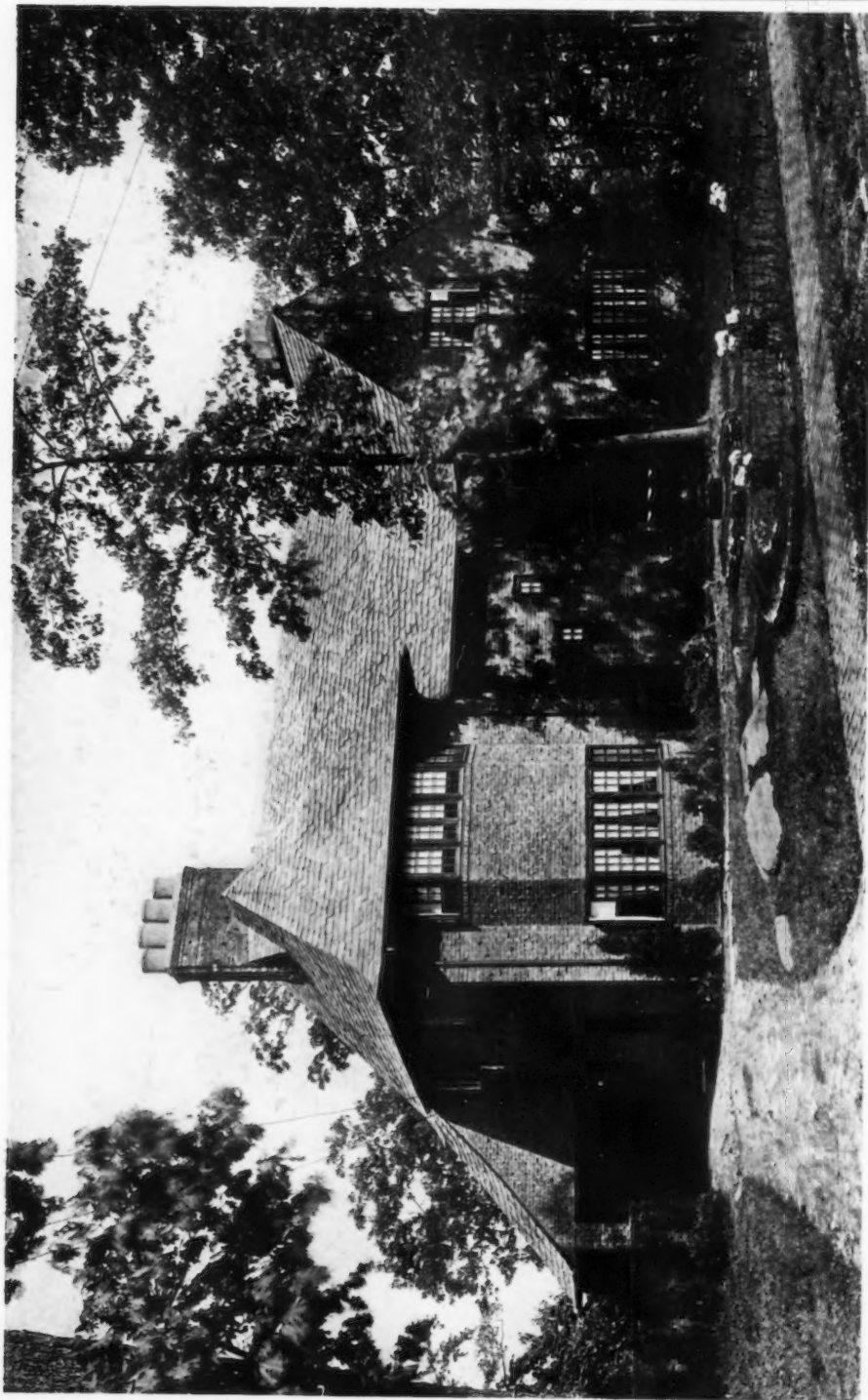


RESIDENCE OF WALTER KELLEY, ESQ., RIVERDALE,
NEW YORK. GEORGE B. POST & SONS, ARCHITECTS.

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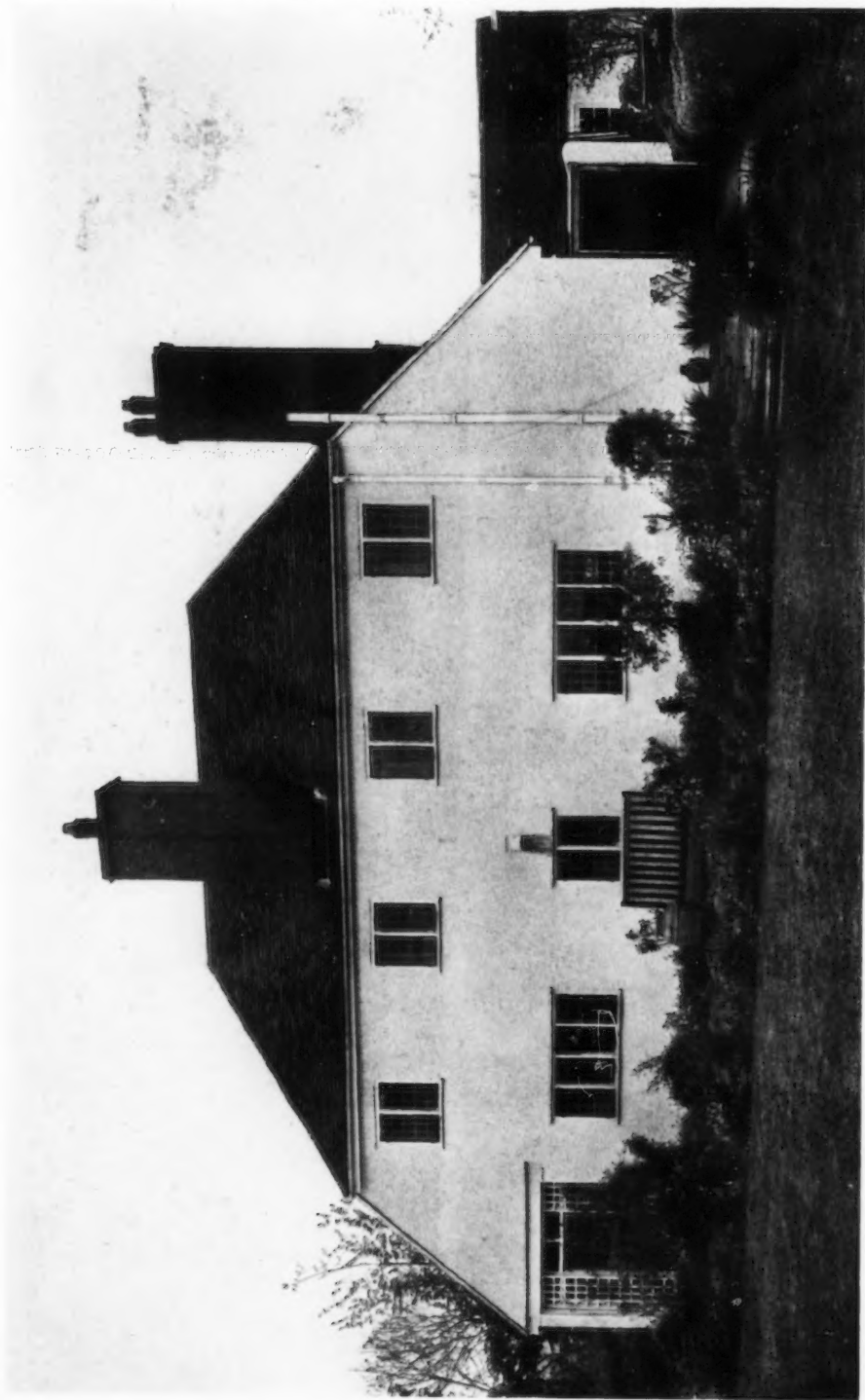
RESIDENCE OF L. K. SCHWARZ, ESQ., SCARSDALE,
NEW YORK. FRANK J. FORSTER, ARCHITECT.



RESIDENCE OF L. K. SCHWARZ, ESQ., SCARSDALE,
NEW YORK. FRANK J. FORSTER, ARCHITECT.



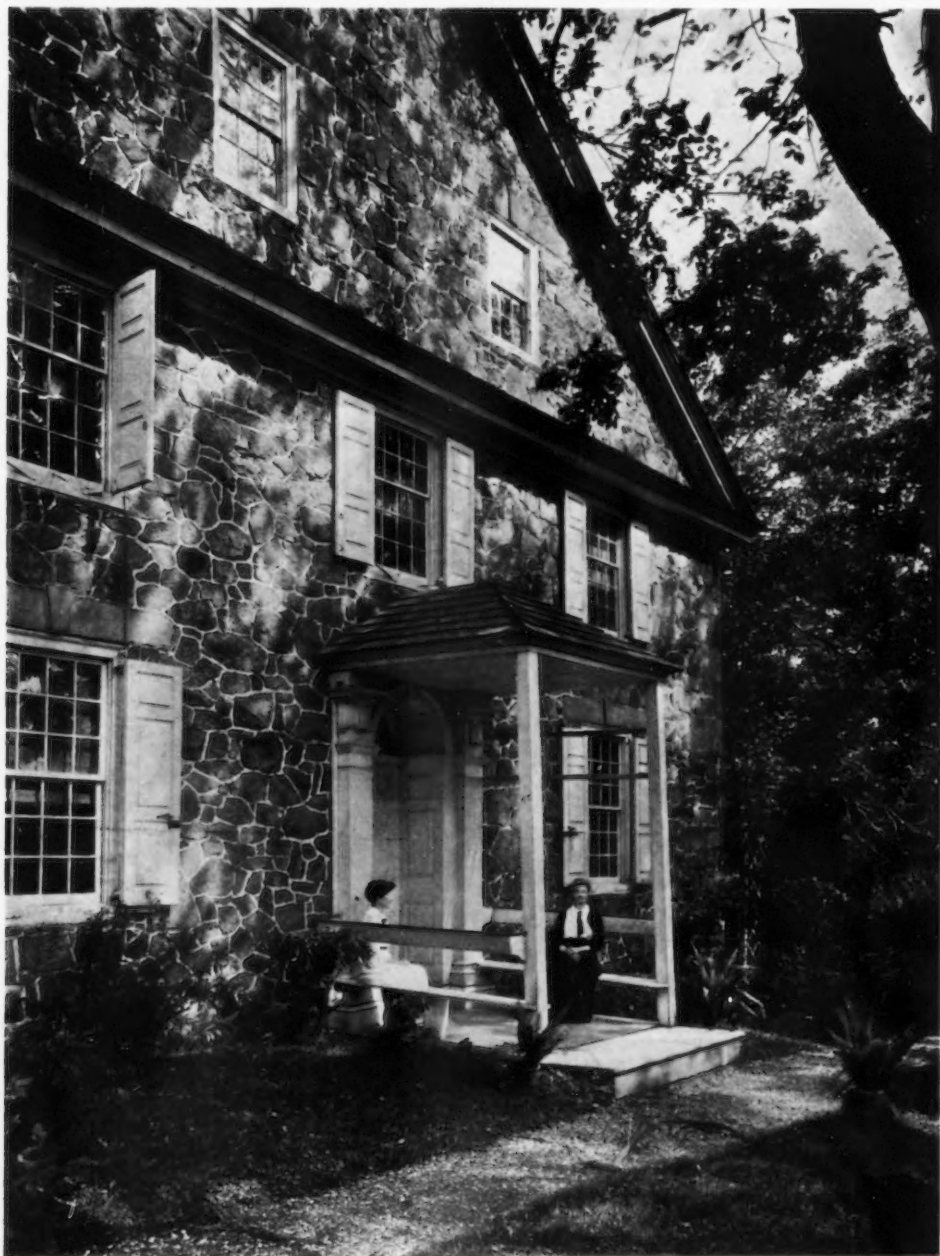
NORTH FRONT—WOODMANSTERNE CORNER, CARSHALTON,
SURREY. ROBERT ATKINSON, F.R.I.B.A., ARCHITECT.



SOUTH FRONT WOODMANSTERNE CORNER, CARSHALTON,
SURREY. ROBERT ATKINSON, F.R.I.B.A., ARCHITECT.



PORCH—WOODMANSTERNE CORNER, CARSHALTON,
SURREY. ROBERT ATKINSON, F.R.I.B.A., ARCHITECT.



END VIEW OF THE BULL
HOUSE AT WARWICK, PA.

✓ The EARLY ARCHITECTURE of PENNSYLVANIA

PART XIV Stonework ✓



By A LAWRENCE KOCHER

OF the many influences that operated to determine the appearance of the early architecture of Pennsylvania, that of materials seems to have been most potent. We noted earlier in this series that this region was unusually well provided with material resources for building; with clay for brick, with timber and stone of excellent quality. The architecture soon reflected this condition, and buildings were shaped that faithfully interpreted the color and rugged character of our country with marked truthfulness. Reginald Blomfield, in his "History of Renaissance Architecture of England" attributed the architectural methods of various districts of England to the physical conditions of the different districts. Where good building stone was abundant, it was used as a matter of course, and an unmistakable local tradition gradually grew together which survived repeated changes of fashion.

It is reasonable to venture the thought that much of our architecture today is out of harmony with our landscape because we have disregarded local materials and local traditions and by whim or fashion have chosen from a country-wide array of new woods, marble, tile, stone and brick. The abundance of building stone on the very site of the colony and the presence of many stone masons who were trained in their craft in England and Wales, went far to influence the extensive use of local stone in Pennsylvania.

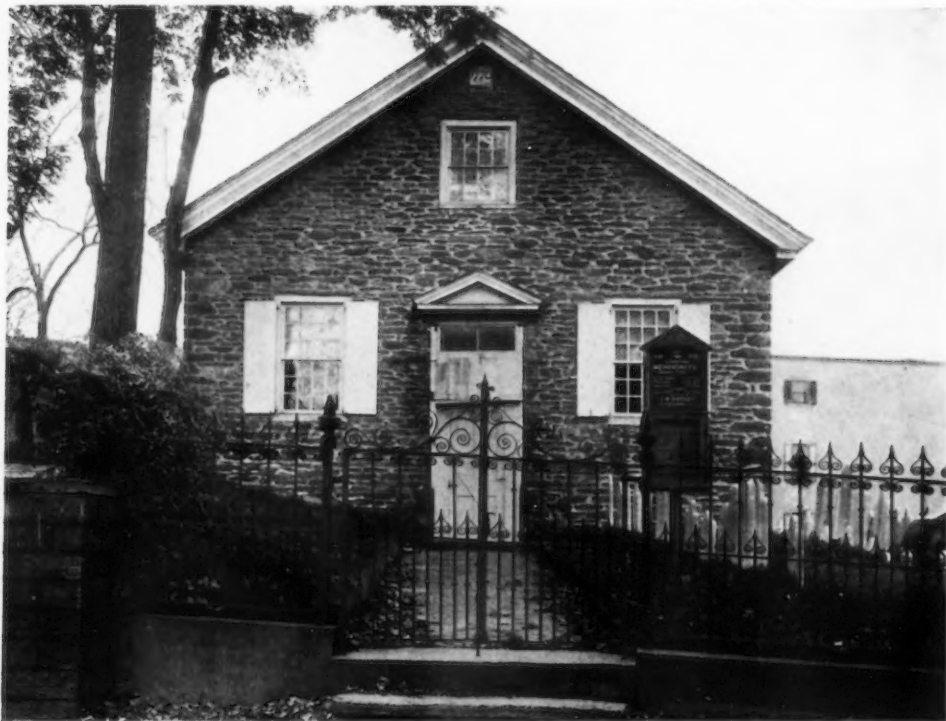
The Welsh thoroughly understood the nature and the possibilities of stone, for in Wales it was almost the only building material available. The new country differed but little from their native heath,

so that the continuance of the traditional methods of laying stone was both natural and expedient.

Limestone, sandstone and an easily quarried, thin-layered ledge-stone known as Wissahickon gneiss, are all found in the eastern counties of the state. It was the last named that was so much used in the domestic architecture of Philadelphia and the surrounding vicinity. This ledge-stone or gneiss was very well suited to building of an informal character. It has all the necessary qualities of a good building stone. It was easily obtained under a few feet of digging, it was durable and attractive in appearance. It may be described as a coarse-grained, banded rock characterized by an excess of mica. Cleavage and jointing are conspicuous features, so that it readily splits into long, flat layers with an interesting texture that has been likened to fibrous wood. The color varies from a light warm gray to a yellow shade with brownish-black stain on the joint planes. In addition, it is delightfully enlivened by the prevailing glint of mica.

The nature of this stone determined, in no small measure, the appearance of the resulting architecture. Walls were simple and unbroken by projection; angle stones or quoins were but slightly larger than the stones in the body of the walls (due to the length and the narrowness of the available material); broad masses were a conspicuous feature of the compositions; window openings were boldly spanned by single stone lintels or with flat arches composed of separate stones, and a rugged, picturesque quality was continually manifested.

The effectiveness of the local stone-



MENNONITE CHURCH AT GERMANTOWN, PHILADELPHIA, PA., DATING FROM 1770.

work was largely a matter of producing a patterned wall that was both structurally stable and satisfying and varied in texture and tone. The stone was roughly dressed with a predominance of horizontal lengths. Large and small stones were evenly distributed to produce accents or spots of repeated sizes and shapes, to excellent effect.

In rubble masonry there was no attempt to square-dress the ends or even to maintain parallel beds. A horizontal effect resulted from the prevailing lengths of the separate stones, many of which were three and four feet in horizontal dimension, while the thickness approximated an average of four or five inches. Stonework was treated very much as we would treat a design, with the many component parts of the pattern unified and knit together by means of the pointing of coarse, white mortar. This is an instance of the way these capable builders submitted their work to the principle of unity, and at the same time avoided

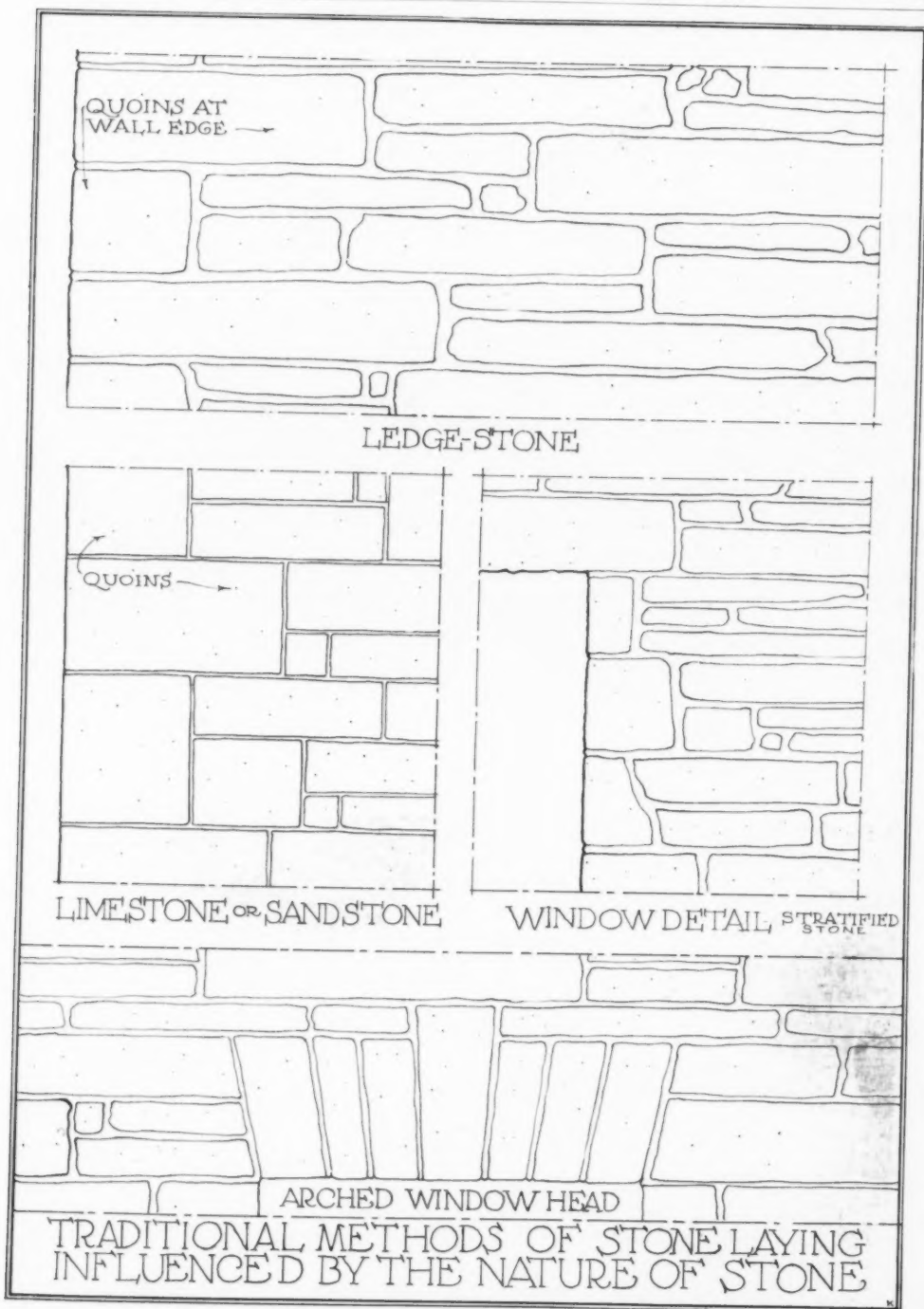
the error of a tiresome uniformity.

The appearance of this stonework can only be fully appreciated by examining the buildings erected of this material on the outskirts of Philadelphia, particularly at Chestnut Hill and Germantown. By such an inspection, alone, can the texture, color and play of light and shade be properly appreciated.

The illustrations accompanying this article give some idea of the methods of jointing that were in vogue in the eighteenth century, and from them we can also better understand the varied effects of different methods of pointing and stone dressing.

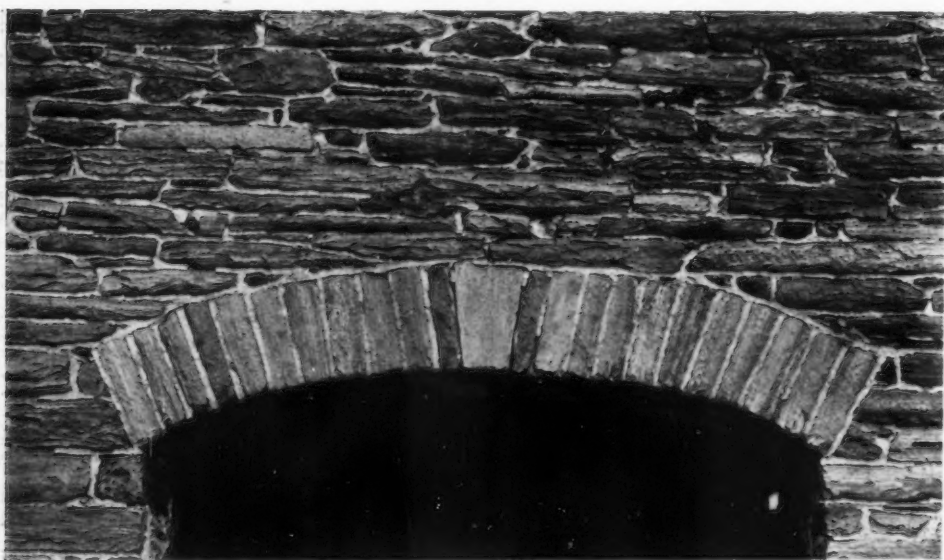
The illustration of stonework from a house at Chestnut Hill, built in 1818, typifies a most approved manner of laying stone. The interesting way in which the long stones prevail is noteworthy. The pointing of white mortar gives a finishing touch and appears to have been added after the stonework was completed; in other words, the pointing was

four hundred thirty-six





THE UPSALA MANSION AT GERMANTOWN, PHILADELPHIA, PA., DATING FROM 1798.



STONEWORK OF A BARN AT CHESTNUT HILL, PHILADELPHIA, PA.

four hundred thirty-eight



STONEMASONRY IN WALL OF BARN AT CHESTNUT HILL, PHILADELPHIA, PA.

a separate process. It is set back a trifle from the face of the stone and is given a "V" shaped or ridge section of scant slope, as the illustration shows.

The stonework of the old barn illustrated is quite similar to the preceding example, with the exception that the mortar in the latter has less finish and was produced with the aid of a trowel as the building up of the stone wall progressed. The excellent workmanship and the variegated texture are displayed to better advantage in another detail view of a similar old barn. Here we can also study the characteristic method of treating the angles, where large stone quoins, twice or three times the average thickness of the stones in the main part of the walls, overlap one another as did the logs at the angles of the log house of pioneer days.

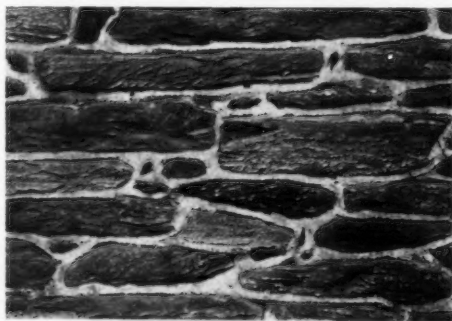
Large stones were also used as "ingoings" and angles at the sides of windows and doors.

It is of some interest to contrast these quoins of ledge-stone with the decidedly larger angles of the Bull house at Warwick. The sandstone of which the Bull house was built, was available in sizes which must have delighted the hearts of the sincere masons, who took an evident pleasure in building up these great courses of masonry. The similar nature of limestone determined again that buildings of limestone should be given an emphasis at the corners.

four hundred thirty-nine

Upsala Mansion in Germantown illustrates an established custom of giving a special dressing to the stonework of the street elevation. The front of this house is composed of dressed stone, laid as smooth tool-faced and regularly coursed ashlar, while the ends and rear are fashioned of similar stone but of the random masonry that we considered above.

It is reasonable to suppose that the smooth finish of the front elevation was due to the desire to harmonize the classical porch with the building to which it is attached. Such an entry would have appeared incongruous or out of harmony with a rough faced wall. For instance, the correct Georgian design requires a setting of stones dressed to a regular size and shape. This can be appreciated by an examination of a doorway of The Highlands at Whitemarsh—another instance of a tool-dressed wall with an equally ambitious front porch entrance.



DETAIL OF STONEMASONRY, HOUSE AT CHESTNUT HILL, PHILADELPHIA, PA.



DETAIL OF STONEMASONRY OF BARN AT CHESTNUT HILL, PHILADELPHIA, PA.



END VIEW OF A HOUSE AT
GULPH, NEAR NORRISTOWN, PA.



DOORWAY OF THE HIGHLANDS,
AT WHITEMARSH, PA.

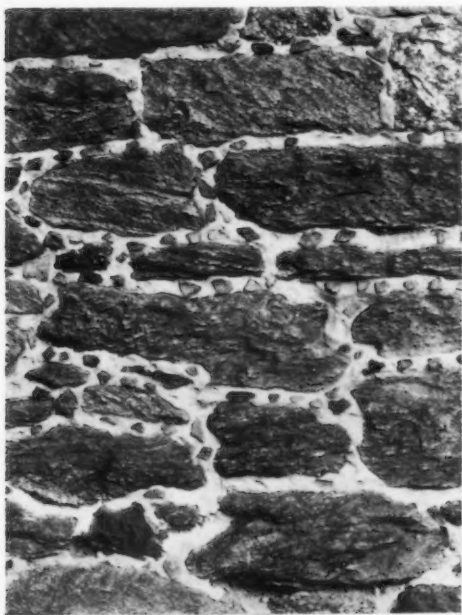
There are cases in which the stone pointing is set back from the face of the stone with what seems to have been a brushed joint. Still another and more individual method is shown on the walls of the Church of St. James, at Philadelphia. This church has wide mortar joints into which small pieces of stone are inserted. This odd treatment harks back to a practice in Derbyshire and Lancashire in England, where similar joints were termed *garreted joints*.

To again call attention to the way that nature of material influenced design, we refer to the house at Gulph, near Norristown. Here is a building built of brownstone—a material which does not have a smooth quarry face, but fractures irregularly and so is ill-suited to building requirements when not surfaced dressed.

The house at Gulph is built of irregular shaped stones, and the effect is disordered, unquiet and distinctly unpleasant. Perhaps it is because we have become accustomed to masonry laid on horizontal beds that we here object to such a medley of shapes and sizes. It is difficult to conceive of stone so refractory



STONEMWORK DETAIL OF ROXBOROUGH HOUSE, PHILADELPHIA, PA.



DETAIL OF STONEMWORK WITH "GARRETED" JOINTS, ST. JAMES CHURCH, PHILADELPHIA,

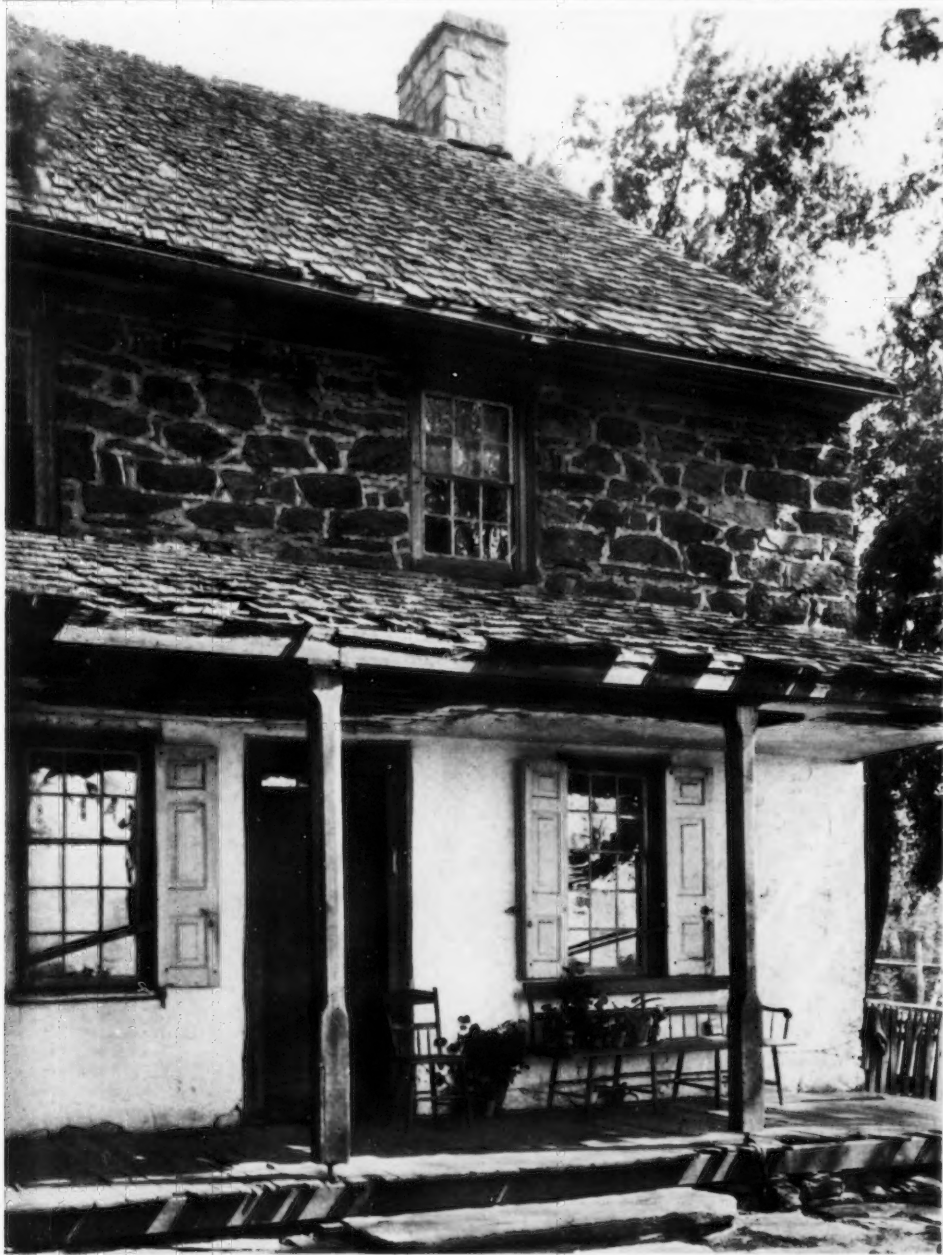
that at least a general predominance of straight lines could not be effected with it, and here, in fact, the stone could have been readily cut, as is shown by the carefully squared quoins.

The belt course of brick between the second and third stories and the brick arch over the circular and square headed windows were structurally an advantage, but they are, in addition, a very successful use of a new material and constitute the best feature of the end wall.

The Bull house at Warwick, previously referred to, is also of irregular stone, used in a better way. It is a case of similar stonemwork redeemed by excellent workmanship. There is an absence of unpleasant angles, and the pointing is narrow and sunk beneath the surface of the stone. While there is much to be desired in the way of structural stability, there is, nevertheless, a pleasing texture, and a skilful fitting of stones which possess a genuine charm.

The window lintels are curious but reasonable. They consist of three stones;

four hundred forty-two



THE WENTZ FARM HOUSE AT WHITE-MARSH, PA., DATING FROM 1804.

one for the key block, the other two deeply bedded in the sides above the window jambs.

This is a convenient place to allude to a kind of stonework without visible pointing, which has become popular with a group of present-day architects of Philadelphia, who have carried on in a notable way the traditions inherited from our early history. We may see instances of this stonework in many old houses and garden walls. Its character is fairly well displayed by the illustrations of a part of the wall of Roxborough House, Philadelphia. In this stonework there is no insistence upon outline nor is there the emphasis that mortar joints give to an expanse of wall; but the effect is at once simple and straightforward. In addition, dwellings built by this method have the advantage of appearing old from the day they are erected, and, to quote Defoe, "Were like an abundance of houses newly built which look like old."

We have yet to consider the many dwellings of stone coated with plaster or covered with whitewash. The stucco, as a rule, was of white or of a pale ochre in

color. The practice was not restricted to any particular district, although it seems to have received encouragement from German artisans who were carrying on the methods of their native country.

Technically, we are compelled to question the reasonableness of covering a permanent material with one that is less enduring. From an aesthetic point of view, however, we welcome the picturesque results which it made possible. There are many examples in Lancaster, Lebanon and Berks Counties, roofed with pleasingly variegated red tile (and formerly with thatch) set down on green pastures, shaded by trees. This stucco was known by the English name of "parge" and consisted of lime, sand and chopped straw or hair well mixed together.

Many farmhouses of stone are more interesting because of their porches, with walls made bright by a background of plaster. Certain pretentious dwellings, such as the Chew Mansion in Germantown, combined plaster ends and rear with the dignity of carefully cut stonework on the front wall.



THE VILLAGE OF EYNSFORD, KENT, ENGLAND



MEMORIAL PLOT, MT. PLEASANT CEMETERY, NEW YORK.
C. F. Pilat, Landscape Architect. F. B. Hinchman, Architect.

A CEMETERY PLOT AS A MEMORIAL

*Designed by Carl F. Pilat, Landscape Architect
in Association with Frederick B. Hinchman, Architect*

BY CARL F. PILAT

THE usual conception of a cemetery plot is a piece of ground of sufficient size to permit of the interment of the bodies of the members of the family and to allow space for the erection of as large a monument as the family can afford.

This idea of having a monument as large and imposing as the means will procure has been carried to such an extent in many communities that one may obtain a fairly accurate idea of the relative financial standing of families by visiting the cemeteries and noting the sizes of the monuments.

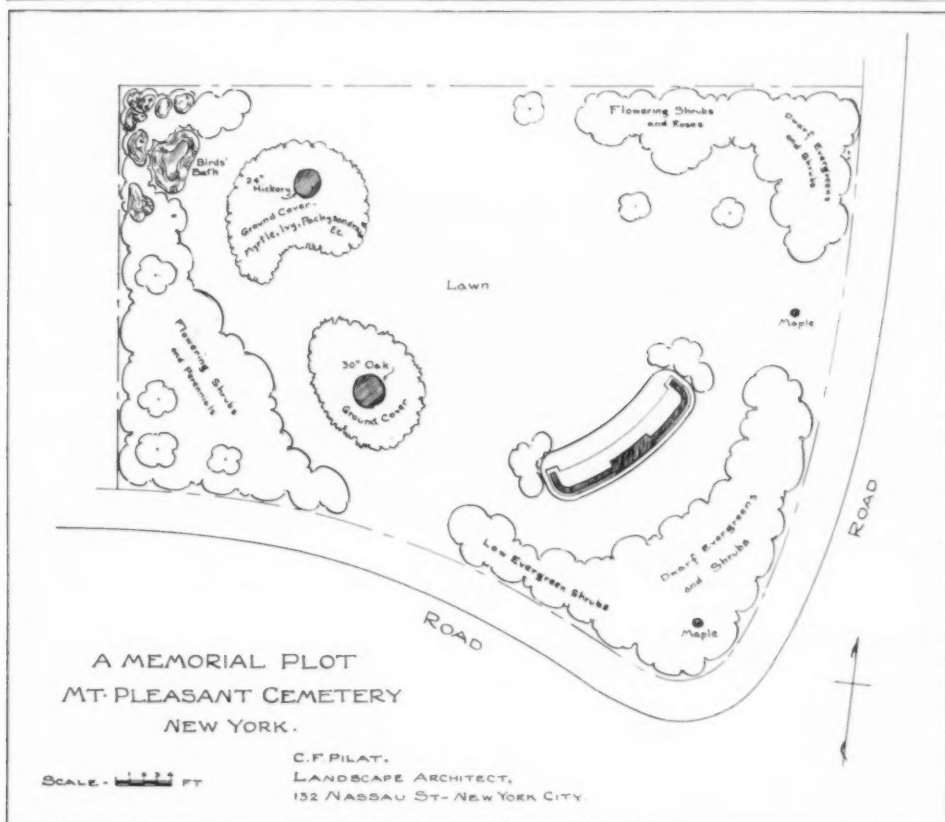
These more or less pretentious creations in stone and bronze are usually so located that the casual visitor to the cemetery cannot fail to be impressed by them—either favorably or otherwise. It is also customary to feature the names of the departed in conspicuously large

letters, which often remind one of business signs and suggest the competitive side of commercial life.

Most monuments are designed and located on the plot in order to appear to the best advantage when viewed from the main road or walk, and the planting, if any, is arranged so as to accentuate their prominence from the outside point of view of the passer-by.

The average cemetery with its rows of mausoleums, shafts, and other more or less pretentious monuments in close proximity, with their conflicting lines and motives competing for the attention of the passerby, is far removed from the restful place of peace and beauty which we have associated with the place called "God's Acre". In a word, the weaknesses and vanities and the competition and sordidness of everyday life are altogether too much in evidence.

four hundred forty-five



In the case of the memorial discussed and illustrated in this article, it was the conception of the designer and the wish of the owner to make the plot of ground itself the memorial instead of following the usual method of securing a cemetery lot on which to erect a conspicuous structure of stone and bronze.

The owner wished to erect a memorial to her husband which would be adequate and enduring, yet simple, beautiful and free from ostentation or suggestion of worldly importance. An important feature of the problem was to provide a safe and permanent place for the reception and care of the bronze urns which had been designed to contain the ashes of the departed members of the family.

After much consideration it was decided that the crypt should be above ground and be a part of a stone exedra to be hewn out of a single block of

granite. After determining on the form of this feature, the next important step was to select a suitable plot of ground. The plot selected and shown on the plan is located on a hill with an easy slope and commanding an attractive view of the valley below. The soil is of good quality, and there are two large native trees which add very much to the interest and beauty of this very delightful spot.

By referring to the plan it is evident that it was the intention to create a garden spot and to use the sacred feature, the exedra, as the important feature of the design, so placed as to be a part of a harmonious composition from all points of view, an end successfully achieved.

The memorial is a rectangular plot of moderate size and the general scheme of development is *naturalesque*, the only formal architectural feature being the stone seat or exedra which is designed to

serve the double purpose of a garden seat and the repository of the funereal urns.

The design and location of the exedra were carefully considered. It is rather severe in its simplicity, unadorned by moldings or other embellishments and is entirely dependent on its simplicity, proportions and execution for its merit and beauty. It is about twelve feet in length, slightly curved in plan and cut out of a single block of the finest granite.

A crypt, sufficiently large for six bronze urns, is hewn out of the widened central portion, which carries a panel for the inscription of the family name in front. The opening at the back is covered by a bronze door in the form of a tablet on which the names of the departed are appropriately engraved.

The exedra rests on a base cut out of a single block of granite, and the level of the stone tread is carried only slightly above the surrounding grass, so as to preserve the simple lines and low effect. The exedra is made a part of the composition by its location and the arrangement of the foliage masses. Low evergreens flank and partially engage it on either side, and large evergreens, forming a part of the boundary plantations, provide a background of foliage. It was located after due consideration of the two large trees, the formation of the open space of lawn, and of the boundary planta-

four hundred forty-seven

tion which partially encloses the plot. This plantation varies in height and composition and is arranged so as to define and frame attractive vistas and to screen from view surrounding roads, paths and monuments. There are low places and openings to allow glimpses into the plot and provide favorable views of the exedra, rustic bird bath and other features of the memorial plot.

Boulders were placed in the southwest corner of the plot where it was desirable to raise the grade, arranged so as to form a small natural rock garden with dwarf evergreens and

rock plants; an added interest in this part is supplied by the bird bath, which is a carefully chosen boulder with a natural basin of adequate size.

The surrounding plantations are composed largely of dwarf conifers and



VIEW SHOWING PLANTING OF DWARF EVERGREENS—MEMORIAL PLOT, MT. PLEASANT CEMETERY, NEW YORK.

C. F. Pilat, Landscape Architect.
F. B. Hinchman, Architect.



VIEW FROM THE ROAD—MEMORIAL PLOT, MT. PLEASANT CEMETERY, NEW YORK.

C. F. Pilat, Landscape Architect.

F. B. Hinchman, Architect.



EXEDRA, WITH EVERGREEN PLANTING—MEMORIAL PLOT, MT. PLEASANT CEMETERY,
NEW YORK.

C. F. Pilat, Landscape Architect.

F. B. Hinchman, Architect.

broad leaved evergreens, but the best of the smaller flowering shrubs are used in intermingling natural groups in connection with larger shrubs and a few trees. These bear flowers and berries which in addition to their beauty also attract the birds. Groups of flowering perennials and bulbs arranged along the borders and among the shrubs add to the floral effect, and ferns and ground-cover plants form

attractive masses under the trees and other shaded places.

It has been the aim to create a garden which would be attractive and bright with flowers and berries during the growing seasons, and beautiful at all times because of its design, the formation of the foliage masses and the weaving together of all of the features to form a harmonious and pleasing composition

SCALE IN ARCHITECTURE

By
Ernst Jonson

ONE of the first requirements of an architectural composition is that it be a unit. Every part of it must belong to the whole. One of the basic conditions of unity is continuity of scale. Unwarranted and sudden breaks in the scale of a composition destroy its unity, and such breaks in scale are not uncommon in modern work. They occur because features from different buildings are incorporated into the work without being first transposed into the scale of the new design. Consistency, however, is only one of the requirements which the scale of a building must fulfil. The scale also must be appropriate to the function and meaning of the building, to the material in which it is executed, to the climate, and to the view-point from which for the most part the building is seen. Monumental buildings demand larger scale than dwellings. Bridges which are seen only from a distance must be large in scale. For the same reason the detail of the upper portions of high buildings must be of large scale. The use of a coarse grained stone suggests detail of larger scale than might be used with a fine grained stone, while work executed in wood may be exceedingly delicate. Furthermore, it is evident that exposure to a severe climate does not justify the use of very small detail. In interior work, on the other hand, there is no restriction in this direction.

In architecture, apart from the magnitude of the structure, there are two principal elements of scale which demand the attention of the designer. One of these is the scale which determines the over-all dimensions of the principal motives, that is to say, depths of entablatures, cornices, string courses, bases, and the height and diameter of columns. The other is the scale of the detail, that is, the scale of the component parts of these motives—of members of cornices and of mouldings.

four hundred forty-nine

The scale of the dominant motives is one of the more potent determiners of the character of a building, more so even than the magnitude of the whole structure. A column five feet in diameter means something quite different from a similar column five inches in diameter. And there is more power in one sixty foot order than in twenty tiers of twelve foot orders.

When an order forms the dominant motive of a composition the problem of motive scale is simple. Then, obviously, the module, or half column diameter, is the most convenient unit of this scale, and with the determination of the size of the module, the problem of motive scale is solved. In the absence of a principal order the problem is not so easy. In a façade with cornice, string courses and window motives, there is not a single dimension which is a function of the module alone. The over-all dimensions of every motive in the façade are also functions of the main dimensions of the façade. In choosing the motive scale for such a façade, therefore, the designer must turn to past work for guidance. For example, we know from analysis of the façade of the Farnese Palace in Rome that its scale is such that the height of a story is about seventeen modules. The more simply a façade is treated, the larger motive scale does it require. Thus in the façade of the Strozzi Palace in Florence there are only about eleven modules to the story. When no adequate precedent exists the proper scale can be found only by trial. The preliminary sketch may be analyzed for its scale, and the scale thus found may then be made the basis of the second draft. If the proportions thus obtained are not satisfactory, the scale must be changed and another draft made.

In a structure of more than one story the motive scale should decrease toward the top. The reason for the feeling that the scale of an upper story should be

smaller than that of the story below evidently lies in our sense of structural fitness. This need is especially obvious when an order is superimposed on another. The decrease in motive scale should be gradual, not exceeding one-sixth per story. Under no circumstances is an abrupt break in scale permissible. And to make the scale of an upper story larger than that of the story below is inexcusable.

While the principal dimensions of doorway and window motives are governed by the dominant motive scale, there may be features of such motives which demand a scale of their own. Thus, for example, the order of a doorway may be proportioned on a scale smaller than the dominant motive scale, so that we may have a sub-motive scale, but this scale must in some way be kept in its secondary position by some definite and dominant manifestation of the scale of the whole.

When an architectural scheme is to be adapted for execution in wood the change of material, apart from any other consideration, involves a change of scale. This change affects the transverse dimensions only, that is to say, the size of the module changes apart from any change in longitudinal dimensions of the motive, such as height of columns. In some of the work of the American-Georgian period the reduction of the module amounts to one-half, but the average motive scale for the best work of this period is about three-quarters of the scale which would be used if the scheme were designed for execution in stone. This means of course that the proportional height of the column is one-third greater for wood than for stone.

In metal work, the scale is reduced in the same manner but to an even greater extent, and in wrought work, the reduction is greater than in cast work.

Even the size of the window glass is not wholly unrelated to the motive scale. Small scale in the architectural motives requires correspondingly small window-panes, if one is to be consistent.

The other element of scale is the detail scale. This is the scale which governs the sizes of the separate mouldings, fillets, beads, brackets, and so forth. In

the Roman temples the detail scale did not vary independently of the motive scale. In the Corinthian order the part which is the unit of the detail scale, was about one-twenty-fourth module and in the Ionic and in the Doric order one-twentieth module. This is indicated by the size of the small fillets, which may be taken as equal to one part. Hence Vignola makes the part a constant fraction of the module. But in the best work of the Italian Renaissance the part becomes an independent variable, the detail scale frequently being as much as one-half larger than in Roman work. The study of Vignola's orders has inculcated a sense of rigidity of Classical proportion which is neither essential to it nor conducive to vitality in architecture. A fuller realization of the essential independence of the detail scale seems to be one of the needs of modern architecture. Variations in detail scale greatly alter the character of an architectural composition, so that by treating the detail scale as an independent variable the range of expression of Classical form is greatly increased.

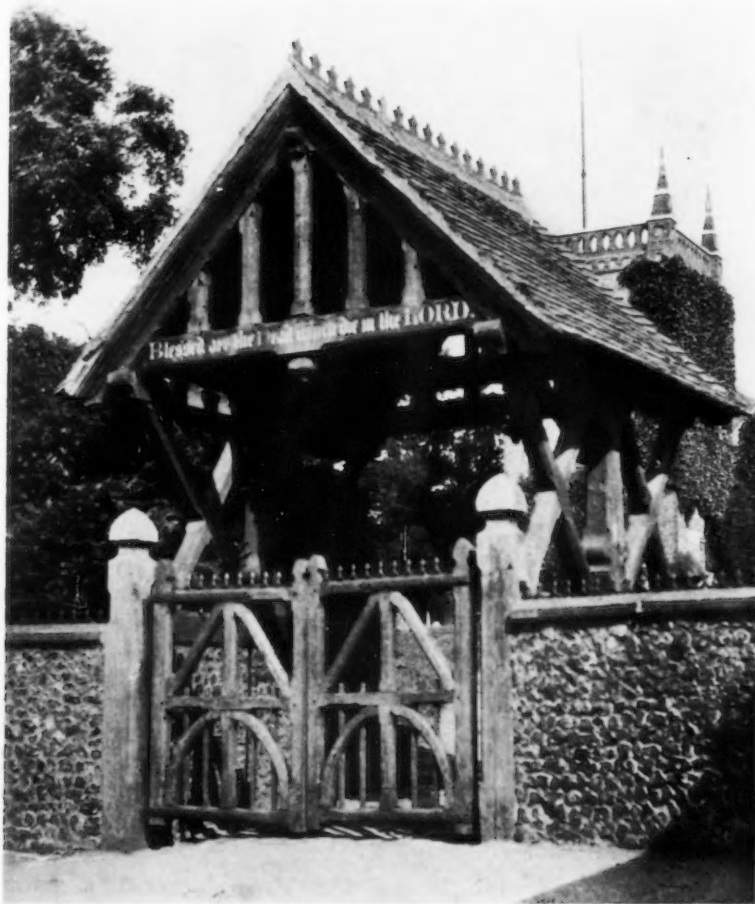
In choosing the detail scale not only must the meaning of the building be considered, but also the nature of the material, the atmospheric conditions, and, above all, the distance from which its various parts are to be seen. Since the detail of the upper portion of a façade will be seen from a greater distance than that of the lower portion, the detail scale should be increased toward the top. In the façade of the Farnese, for example, the detail scale of the main cornice is one half greater than that of the ground story. Some of our high buildings might have been improved by a fuller application of this principle. On the other hand, the detail scale of doorways is in many cases made smaller than that of the rest of the ground story, which seems justifiable insofar as the doorway is frequently seen from a shorter distance than the rest of the building. For the same reason interior work for the most part is of small detail scale.

When the detail scale has been determined upon, every part of the composition must be made to conform to it.

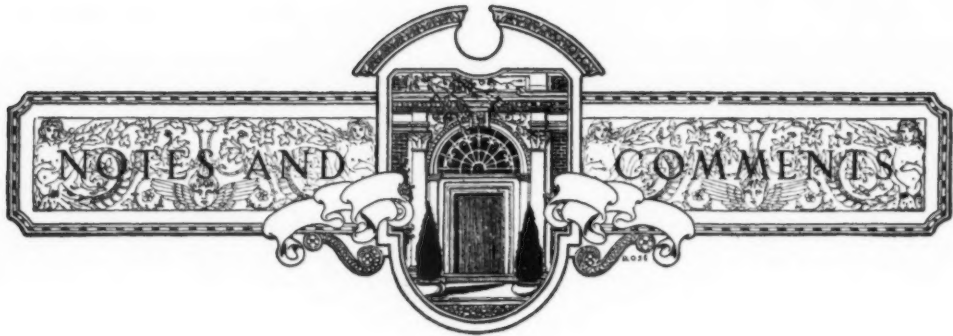
An undigested jumble of beautiful motives cannot be called architecture.

The main impost of the Arch of Constantine in Rome is a striking example of unwarranted deviation from the general scale of a structure. A full Corinthian cornice was used as an impost. This necessitated a much smaller detail scale than that which prevails throughout the rest of the structure. Before using a feature in a composition its detail scale should be made to conform

to the scale of the portion of the structure into which it is to be incorporated. This may involve radical re-designing. If the scale has to be substantially increased the feature must be correspondingly simplified. A Corinthian cornice may have to be reduced to an Ionic cornice, and if then the scale cannot be made large enough a member may have to be dropped from the bed mould and perhaps also the cymatium omitted from the corona.



✓ A LYCH-GATE IN KENT, ENGLAND



**A Miniature
Desert in the
Heart of
the City**

It is quite unusual to have a desert in one's front yard, but there is a tiny but impressive one to be seen before the office of Ford & Becker, realtors, on Western Avenue, Los Angeles. There, on either side of the attractive entrance, can be seen a miniature desert—the real thing minus only miles of desolation and a far-off horizon. The curious plants have been brought, each and every one of them, from either the Mojave Desert or Imperial Valley, and the old-timer may recognize the common or "Hairbrush" Cactus, the Giant Cactus, the Barrel Cactus, the Desert Palm and half a dozen others. If you were lost in the desert (not this one, but on a larger scale) and had no water you might save your life by slicing the top off one of these Barrel Cactuses and extracting the fluid.

If you look closely you may also see a number of bleached animal bones brought a distance of 175 miles or so to finally rest

here. Also there is pumice stone, which appears to be plentiful in Inyo County, and might perhaps be developed commercially.

This miniature desert has caused much comment from the public and possesses, as may well be supposed, a distinct advertising value. For instance, one man from Chicago inquired about this feature and eventually was sold property to the value of \$65,000. It sometimes pays to have a miniature desert around, doesn't it?

"The little pink building with the cactuses in front" is the way people very frequently refer to this place; and so it needs no extended dissertation to prove that a miniature desert may be the means of fixing your place of business in the minds of the public at large.

The building itself is worthy of comment. Not only is the exterior effective, but the interior is developed in a manner which is very interesting and extraordinarily attractive. Each room seems to have an air of quaintness and comfort about it. An up-to-date real estate business need not



MINIATURE DESERT BEFORE THE OFFICES OF FORD & BECKER, REALTORS,
LOS ANGELES, CAL.
H. H. Whiteley, Architect.

be housed in plain and severe-looking quarters, but may profit in more ways than one from beautiful surroundings.

The moving picture folk have used this setting on a number of occasions. There is another garden—if we may term the little desert as such—in the rear; and altogether it is probable that all Los Angeles contains no other place comparable to this. The idea of the building is to be credited to Mr. Ford; the architect is Mr. Harry H. Whiteley.

CLARENCE M. LINDSAY.

Ventilating Code Submitted for Approval by A. E. S. C.

ards Committee for approval as American Standard.

This code was prepared by a committee of the American Society of Heating and Ventilating Engineers in response to requests from state commissions, legislative bodies, public health agencies and other organizations for suggestions to be used in the preparation of legislation and regulations regarding the heating and ventilation of buildings. The committee endeavored in this code to cover the general features most essential to the public health, in such a manner as to protect the public with the least possible expenditure for equipment and without unnecessarily limiting the methods of obtaining the desired results.

Section 1 of the code relates to general matters pertaining to all classes of buildings; the remaining three sections relate to schools and colleges, factories, and theatres, respectively.

Among the States that have utilized parts of the code in their regulations are: Illinois, Indiana, Kansas, Massachusetts, Minnesota, New Jersey, New York, Ohio, Pennsylvania, Utah, Virginia and Wisconsin. A thoroughly representative special committee, including all the important organizations interested in the subject, has been appointed by the American Engineering Standards Committee to investigate the status of the code in the industry and the desirability of approving it. Sidney J. Williams, Chief Engineer of the National Safety Council, is chairman of this special committee.

The American Engineering Standards Committee would be very glad to learn from those interested of the extent to which they make use of this code, and to receive any other in-

formation regarding the code in meeting the needs of the industry.

Real Furniture

The best modern furniture usually is that copied from good examples of Renaissance work. The aim of makers of fine furniture is to produce work so like the old that one cannot detect the difference. That the new piece be constructed like the old is not regarded as essential. Nor are some modern furniture builders concerned about the way in which time and wear will affect their work. So long as it retains its likeness to its prototype until it is sold, they are satisfied, and what their work will look like ten years hence or a hundred years is not a matter of vital interest.

The operations by which the modern manufacturer seeks to realize his ideal of exact imitation, are called "antiquing." For the most part this process of antiquing is applied by men without the requisite skill and utterly lacking in appreciation of the beauty of old work. Hence antiquing usually degenerates into a uniform coating of dark stain which destroys the color of the wood without producing the least suggestion of age. On the other hand there are makers of furniture who have brought the technique of antiquing to the highest point of development of which it seems capable. However, a new piece of furniture, even when antiqued with the greatest skill, never looks like old work to anyone who is familiar with it. The reason for this failure is that the antiqued reproduction lacks one of the essential characteristics of old work; it lacks *reality*.

A new piece of furniture while in the wood, that is, before any finish has been applied to it, looks raw, but there is about it an air of reality which is dissipated by the application of the usual finish. That is to say, good furniture, while new, must necessarily look as the old furniture did when it was new. The result is that time and wear affect good furniture in the same way as they have affected the old work. Every year's use obliterates some of the difference between the new and the old. After a couple of years the greater part of the difference has disappeared, and within five years the inimitable charm of genuine aging begins to show itself.

The antiqued reproduction is very differently affected by wear. In a few years its make-believe antiquity will deteriorate

into shabbiness and dinginess. The antiquing, unless done with unusual skill, wears off on the edges. And instead of the rich patina which real furniture acquires with age, a distressing dinginess has developed. One of the characteristics of a genuine work of art is its ability to withstand the ravages of time without losing its artistic quality. No matter how faded and stained and worn and broken it may be, the artistic content remains. The antiqued reproduction, on the other hand, cannot stand the test of time.

Another quality essential to reality in furniture, is workmanlike construction. The mediaeval framers perfected the art of timber construction. When with the advent of the Renaissance the art of furniture building came into prominence, the principles of the framer's art were adopted by the cabinet makers. During the sixteenth and seventeenth centuries every considerable piece of furniture was built on a properly constructed frame. This frame consisted of posts connected by stretchers tenoned into the posts and secured by pins passing through the post and the tenon. It was under the guidance and limitation of this basic structural requirement that the best types of the Renaissance were evolved. Without the inspiration and restraint of a workmanlike concept of construction, no designing in the true sense, whether in architecture or in the minor arts, is at all possible. In all true furniture designing the essential frame must appear as the dominant motive. When this concept of an essential frame is absent the designer, no matter how clever he may be, is quite at sea. If that is so, why not build the piece as it was thought out in being designed? We know that the tenoned and pinned frames of the Renaissance are more reliable than the dovetailed or dowelled frames of the eighteenth century. Furthermore, good framing practice satisfies the instinct of workmanship in a higher degree than the less workmanlike forms of construction. The only thing that can be said in favor of dowelling is that it is cheaper than cutting a mortise and tenon, but the difference in cost is not appreciable, and certainly not commensurate with the difference in quality.

Another characteristic of truly craftsmanlike furniture construction is that every member is formed of one solid piece of wood. In modern furniture the heavy members are almost always built up of thin lumber glued together. This practice simplifies the problem of stock. Thin lum-

ber is also more quickly seasoned than heavy. Apart from the relative unreliability of glued joints, they always detract from the artistic quality of the work. Continuity of natural grain broken only by definite lines of framing, is one of the essentials of truly craftsmanlike work. To use glued joints in tops of tables and chests may be excusable, but there is no need for gluing up posts or panels. Even tops can be framed and paneled flush so that their integrity is not dependent on glued joints. Well seasoned, full sized lumber will always be one of the essential requirements of workmanlike furniture. And if seasoning cracks should appear in heavy posts this is not necessarily an occasion for regret. Such cracks rather add to than detract from the interest of the work. On the other hand, a glued joint which has opened is nothing but a defect. Workmanlike wood construction is not injuriously affected by variations in moisture, for its design is such as to make allowance for shrinkage and swelling.

In wood work, the right finish is fully as important as right construction and right design. The first requirement of a wood finish is that it be unobtrusive. It is the wood that we want to see and feel, not the finish. The purpose of the finish should be to bring out all the potentialities of color inherent in the wood, not to change the natural color. The natural color of wood cannot be improved by artificial means. Any attempt to do so invariably results disastrously. Any finish which involves the use of stain or pigment ruins the natural color of the wood. Other proper functions of a finish are to keep the wood clean, and to protect it from mechanical injury by hardening the surface.

When a piece of furniture has been built it should be washed with water to raise the grain and then left without finish and exposed to strong light as long as practicable. A few weeks of such seasoning will take away the rawness of the newly cut wood and give it quite a tan. Then the roughness of the surface should be taken off by light sandpapering. When the desired surface has been obtained it should be filled with bees-wax softened with turpentine or with kettle-boiled linseed oil. Wax gives a light finish, oil a dark finish. On light wood, oil is generally preferable because it produces a warmer and richer color than wax. Oak, when finished with kettle-boiled linseed oil, takes on a beautiful, rich, brown yellow color. Wax brings out the color of walnut most

satisfactorily. Oil, however, produces a hard non-absorbent surface which is not stained by water or by hot dishes, and makes, therefore, an ideal finish for dining room furniture.

In applying either wax or oil, all surplus material should be wiped off, and the surface rubbed till dry. Every additional application adds to the richness of the surface. One waxing results in a subdued polish, while it takes two or three coats of oil to produce the same effect.

The capital difference between the ordinary antiqued reproduction and a piece of real furniture, however, lies not immediately either in the construction or in the finish, but in another distinct quality, absent in one and present in the other. Every honestly built and frankly finished piece of furniture inspires us with a strong sense of reality. This reality is not a mere conceptual attribute imposed on the work by our conscious thinking, but it affects us as a power inherent in the work itself. Without it the most beautiful combination of line, proportion and color results in nothing more than a representation or imitation. We may enjoy a good antiqued reproduction on account of its lines and its proportions. We may even by the aid of our imagination visualize it as a genuine old piece, but the reality thus imparted to a work is a thin, evanescent reality. The inherent powerful reality of an equally well designed but frankly new piece is quite a different thing, not to mention the still more powerful reality of the original, for this quality of reality is a thing which time augments.

As a result of the bond of reality which unites frankly finished and rightly constructed new work with old work, such new work can be placed next to old work without being thereby discredited. The antiqued reproduction, on the other hand, when placed next to genuine old work always looks mean, ridiculous and contemptible.

ERNST JONSON.

The Le Brun Scholarship Committee of the New York Chapter A. I. A., Julian Clarence Levi, Chairman, announces the holding of a competition for the award of this scholarship for the year 1923. The application and nomination blanks can be had of the Secretary of the various Chapters, A. I. A., or the Le Brun Scholarship Committee, New York Chapter, A. I. A., 215 West 57th Street. The programme will

four hundred fifty-five

be issued towards the end of December and the competition drawings will be rendered about March 1, 1923.

An Advance in Economical Construction

The new construction classification just announced by the Underwriters Laboratories of the National Board of Fire Underwriters, opens the way for a considerable extension of economical house construction. The new classification consists of ordinary wood construction with metallic lath and gypsum plaster covering. The engineers have found that such construction will resist an unusually severe fire for longer than an hour, and accordingly have given the high insurance rating of "one hour" to floors and bearing walls so constructed.

A step further in the same direction, which is not improbable, will have a very beneficial effect on the "twilight" zones of many American cities. The new classification applies only to interior work, gypsum plaster not being adapted to weather exposure. It is hoped that eventually a like ruling will be made for frame construction with stucco exterior surfaces of some sort of plaster on metal lath.

Even limited to interior construction, the new rating is of great importance. Though it does not result in lower insurance rates on frame construction, it contributes greatly to safety and fire-resistance in both ordinary and frame construction, and will justify building codes in broadening the zones within which frame construction is permissible. As about three-fourths of American buildings are of frame, any innovation which increases their resistance to fire is of the utmost importance. In all American cities lumber is still the most economical material for dwelling construction. Consequently, the undue extension of fire limits into residence quarters often imposes heavier construction costs than property and rental values will bear. This has resulted in the "twilight" zone or no-man's land of stagnation and decay which is apparent in so many otherwise vigorous American cities. As property owners have found that beyond a certain point within the fire limits it is unprofitable to improve or rebuild in accordance with building code requirements, old structures have not been replaced and have been allowed to deteriorate and become the shelter of shabby businesses and slatternly homes.

May Enter Hospital Competition Until December 15

Thirty days have been added to the original registration period for entry in the \$1,000 prize competition for small hospital plans which is being conducted by *The Modern Hospital* magazine, according to a recent announcement. This advances the final day for registration to December 15 and extends the date for submitting designs to February 1.

Inquiries about the contest from architects in England, European countries and even New Zealand have necessitated an extension of the period for registration. Although foreign interest was scarcely anticipated, owing to the vastly different conditions governing hospital construction abroad, the competition is open to all architects and any such designs will not be excluded.

A jury of award is soon to be announced, its personnel to include two architects of recognized standing, two seasoned hospital superintendents, and one registered nurse who has had experience in small hospital administration. Details of the competition are furnished at the Chicago office of *The Modern Hospital*.

On the recommendation of the Engineers' Club of Philadelphia, and the Philadelphia Chapter of the American Institute of Architects, Dr. Paul Philippe Cret and Mr. E. B. Temple have been designated as Architect and Engineer, respectively, to take charge of the preliminary planning of the Sesqui-Centennial Exhibition to be held in Philadelphia in 1926 in celebration of the 150th anniversary of the Signing of the Declaration of Independence. Mr. Temple, in consultation with the Engineers' Committee, and Dr. Cret, in consultation with the Architects' Committee, will select their associate engineers and architects. They have volunteered their services as a matter of civic pride and will act without compensation for this preliminary work.

Architects and specification writers will probably find much of interest in the National Exposition of Power and Mechanical Engineering, to be held at Grand Central Palace, New York, from December 7th to 13th. Many of the exhibits will consist of equipment used in the construction and operation of large city buildings, industrial plants, etc.

The Architectural Record,
New York City.
Dear Sirs:

In the September issue of the "Architectural Record" we note that you have published under current Architecture, two interiors titled "Chapel of the Mediator of Holy Trinity Parish, Philadelphia,"—"Thomas, Kirkpatrick & Martin, Architects."

We do not know who could have given you this title, for the chapel of the Mediator has nothing to do with Holy Trinity Parish, but is a Chapel of the Church of the Holy Apostles. There is no such firm as Thomas, Kirkpatrick & Martin, but a firm Thomas, Martin & Kirkpatrick; and furthermore the Church was not designed by that firm, but by myself individually before we became associated.

We would greatly appreciate your noting correction of this error in your next issue, which has been specially requested by the Rector of the Church.

Trusting that you will kindly make this notation and correction, I remain,

Yours very truly,

WALTER H. THOMAS.

Stanley Bruce Elwell and Robert Murray Blackall announce that they will associate in the practice of architecture under the name of Elwell and Blackall, 44 Bromfield Street, Boston, Massachusetts.

Mr. H. George Fink, A. I. A., of Miami, Florida, has removed his office from the Republic Building to Suite 301-340 in the Merrick Building, and desires catalogues and samples of all materials for his sample room.

Mr. Henry Calder Thomas, registered architect, announces the opening of his office at 139 East State Street, Ithaca, New York, for the general practice of architecture and landscaping.

Mr. Francis Chiaverini announces his partnership with Mr. Blank (Chiaverini & Blank) with office at 32 Broadway, Providence, R. I.

Mr. C. Davis Goodman, announces the opening of an office, Suite 34, 14 St. John's St., Montreal, Que., Canada, and desires to receive manufacturer's catalogues.

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